
State of Mississippi



2007 STD/HIV EPIDEMIOLOGIC PROFILE

Mississippi State Department of Health, STD/HIV Office

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Executive Summary

As of 2007, there were people living with HIV disease in every county in Mississippi, and the numbers continue to increase each year. The total number of people living with HIV disease at the end of 2007 was 8,806 of which forty four percent (44%) were living with AIDS. The decline in deaths due to HIV disease over the last five years can be attributed to the advent of highly active antiretroviral therapy (HAART) in 1996.

HIV disease is distributed disproportionately in Mississippi. Most new HIV disease cases were diagnosed in the West Central Public Health District (District V), the home of metropolitan Jackson, where 40% of all persons currently living with HIV disease in Mississippi resided. In 2007, the prevalence of HIV disease was 567.1 per 100,000 persons. This district is second to the Delta-Hills Public Health District (District III) with a prevalence of 383.7 per 100,000 persons. The third-ranked district is the Coastal Plain Public Health District (District IX) with a prevalence of 267.9 per 100,000 persons.

African Americans continue to be disproportionately affected by HIV disease. Approximately thirty-eight percent (37.5%) of Mississippi's population is African American; however, African Americans made up seventy-six percent (76.1%) of all newly diagnosed HIV disease cases in 2007. The HIV disease diagnoses of African Americans in 2007 were nearly four times that of whites. The proportion of HIV disease diagnosis among women in Mississippi has steadily increased with time. In 2007, women represented thirty-one percent (31.2%) of newly diagnosed HIV disease cases. Even though the incidence of HIV disease has been on the rise, there has been significant reduction of HIV infection of infants due to maternal transmission during pregnancy and at birth. This significant advancement in HIV prevention effort is attributed to advances and effectiveness of HIV/AIDS treatment and therapies, as well as, statewide perinatal case management.

Seventy-one percent (71.3%) of African American males and females reported No Identified Risk (NIR) as their mode of exposure. Among African American males, thirty-three percent (33%) reported male to male sexual activity and five percent (5.4%) of African American females reported heterosexual contact. Fifty-seven percent (57%) of white males and females reported NIR as their mode of exposure. Among white males, the predominant exposure is male to male sexual activity (43.7%) and nine percent (8.8%) of females reported intravenous drug use.

Data from the Behavioral Risk Factor Surveillance System (BRFSS) conducted in 1997 suggest that, in Mississippi, more than half the population surveyed (50.8%) reported never having a blood test for HIV. Data also showed that 70.3% of Mississippi respondents reported no chance of getting infected with HIV and 23% reported low chances of getting HIV. Since 1997, the number of participants tested for HIV has increased.

Counseling and testing are essential and important components of HIV/AIDS prevention. Testing data collected in 2007 by the Mississippi State Department of Health Laboratory suggests that the majority of persons tested for HIV/AIDS were African Americans (67%) followed by whites at 27%. Sixty-six percent (66%) of individuals tested were female and 44%

were between the ages of 25-44 years old. Among men, 94% reported sex with a female as their risk factor and 6% reported sex with a male. Ninety-nine percent (99%) of women reported sex with a male as their risk factor.

INTRODUCTION

This epidemiologic profile provides detailed information about the current HIV/AIDS epidemic in Mississippi, specifically from 2003 to 2007. The report describes the population of Mississippi, people living with or infected by HIV/AIDS, and people at risk for HIV infection. The profile is an essential planning tool for HIV/AIDS prevention and care throughout the State of Mississippi. The data presented in this profile serves as a guide to prevention and services efforts, justification and solicitation of funds for the implementation of prevention and care services, and the evaluation of programs and policies throughout the state. This comprehensive document is based on multiple data sources that address the four key questions listed below.

1. What are the sociodemographic characteristics of Mississippi's population?
2. What is the scope of the HIV/AIDS epidemic in Mississippi?
3. What are the indicators of risk for HIV/AIDS infection in Mississippi?
4. What, if any, are the patterns of HIV services usage in Mississippi?

EPIDEMIOLOGIC PROFILE BACKGROUND

This profile was developed in accordance with the Integrated Guidelines for Developing Epidemiologic Profiles: HIV Prevention and Ryan White CARE Act Community Planning which was created by the collaborative efforts of the CDC and HRSA.

PROFILE DATA SOURCES

HIV/AIDS Surveillance

AIDS is a reportable condition in all states and territories. AIDS cases have been reportable since the early 1980's and cases have been defined according to the prevailing CDC surveillance case definition (last revised in 1993). The AIDS Surveillance system was established to monitor incidence and the demographic profile of AIDS, describe the modes of HIV transmission among persons diagnosed with AIDS, guide the development and implementation of public health intervention and prevention programs, and assist in the assessment of the efficacy of public health interventions. AIDS surveillance data are also used to allocate Ryan White Care Act Part A and B funding. States and local health departments actively solicit disease reports from health care providers and laboratories. Standardized case report forms are used; these forms collect socio-demographic information, mode of exposure, laboratory and clinical information, vital status, and referrals for treatment of services.

Reporting of HIV infections to local health authorities is an integral part of AIDS surveillance activities and it has been recommended by the CDC and other professional organizations since the virus was identified and a test for HIV was licensed. Mississippi initiated confidential HIV name based reporting in 1988. As part of ongoing active HIV surveillance, state and local health departments educate providers on their reporting responsibilities, establish active surveillance sites, liaise with laboratories conducting HIV testing including any test that may be indicative of HIV infection (i.e. EIA and Western Blot testing, IFA, PCR, CD+4, Nucleic Acid Tests) and investigate HIV cases of epidemiological importance. Currently, all states are federally

mandated to conduct name based HIV reporting to receive funding, although some are still not in full compliance.

Ryan White CARE Act Data Report (CADR)

The CADR is an annual data report form used to collect information from grantees and service providers funded under Titles Part A-E of the Ryan White CARE Act. The CADR provides basic information that can be helpful as grantees plan and implement changes in their CARE Act service systems to better address the needs of communities serving people living with HIV/AIDS. The CADR collects aggregate unduplicated demographic information (gender, race, age, HIV Exposure Category, etc.) on total counts of clients served by each provider as well as health insurance coverage and utilization data about medical and support services.

Behavioral Surveys:

Behavioral Risk Factor Surveillance System (BRFSS)

The BRFSS is a state-based random digit-dialed telephone survey that monitors state-level prevalence of the major behavioral risks among adults associated with premature morbidity and mortality. Each month, a sample of households are contacted and one person in the household who is 18 years or older is randomly selected for an interview. Multiple attempts are made to contact the sampled household. A Spanish translation of the interview is available. Respondents to the BRFSS questionnaire are asked a variety of questions about their personal health behaviors and health experiences. Since 1994, the BRFSS questionnaire has asked questions related to HIV/AIDS of respondents aged 18-49 years. In Mississippi, HIV/AIDS and sexual activity questions administered are part of the Core Questionnaire. These questions include: perceived risk of getting an HIV infection; use of HIV testing; reasons for testing; if tested, the type of place where tested, receipt of post-HIV test counseling; attitudes towards condoms; and attitudes about when to initiate HIV/AIDS education in school.

Youth Risk Behavior Surveillance System (YRBSS)

The YRBSS was developed by the CDC in collaboration with representatives from 71 state and local departments of education and health, 19 other federal agencies, and national education and health organizations. The Youth Risk Behavior Surveillance System was designed to focus the nation on behaviors among youth related to the leading causes of mortality and morbidity among both youth and adults and to assess how these risk behaviors change over time. The YRBSS measures behaviors that fall into six categories: (1) behaviors that result in unintentional injuries and violence; (2) tobacco use; (3) alcohol and drug use; (4) sexual behaviors that result in HIV infection, other sexually transmitted diseases, and unintended pregnancies; (5) dietary behaviors; and (6) physical activity.

Communicable Disease Surveillance:

STD Surveillance

The Mississippi State Department of Health, Office of STD/HIV conducts statewide surveillance to determine the number of reported cases of STDs and to monitor trends. Other services include partner counseling and referral services for examination and treatment. In Mississippi, chlamydia, gonorrhea, syphilis, and chancroid are reportable sexually transmitted diseases.

Chlamydia is the most frequently reported of all reportable diseases, followed by gonorrhea. Mississippi does not collect risk factor data for all STDs, however; demographic information (age, race, sex) and STD disease history are collected. However, Mississippi collects risk factor data for syphilis, and STD surveillance data can serve as a marker for changes in HIV disease trends.

TB Registry

The Mississippi State Department of Health, Office of Communicable Disease's Tuberculosis Office conducts statewide surveillance of cases of tuberculosis (TB). All TB cases diagnosed in Mississippi are reported using the CDC Report of Verified Case of Tuberculosis (RVCT) form. Surveillance information and laboratory reports are maintained in the Communicable Disease Case Information System (CDCIS). Surveillance data are analyzed to monitor statewide trends, including HIV/TB co-infection. Each quarter, TB registry data is matched with HIV/AIDS surveillance data.

Population Data:

U.S. Bureau of the Census

The Census Bureau collects and provides information about the people and economy of the United States every ten years. The Census Bureau's Web site (<http://www.census.gov>) includes data on demographic characteristics, family structure, educational attainment, income level, housing status, and the proportion of people who live at or below the poverty level. Summaries of the most requested information for states and counties are provided, as well as analytical reports on population changes, age, race, family structure, and apportionment. State- and county-specific data are easily accessible, and links to other Web sites with census information are included. The Mississippi-specific Census data used in these profiles are based on 2006 population estimate data. It should be noted; though, that census data for Latinos, significantly understates their presence in Mississippi.

Mississippi State Department of Health, Office of Vital Statistics

The Mississippi State Department of Health, Office of Vital Statistics provides information from birth and death certificates, marriage records and the annual statistical publication for the State of Mississippi. The annual statistical publication summarizes a wide range of information, including population data and analytical reports on population changes. Other topics include age and race data, birth, death, marriage, divorce, and adoption data.

PROFILE STRENGTHS AND LIMITATIONS

Although the HIV/AIDS surveillance system is extensive, it is based on people who have been tested for HIV. Consequently, HIV infections are under-detected and underreported because only persons who feel they are at risk for HIV and choose to be tested and people who are screened for medical or insurance coverage reasons are tested. Also, people are tested at different stages of HIV infection, and many people are not tested until HIV infection has progressed to AIDS. Thus, the data in this document is not necessarily representative of the characteristic of persons who have been recently infected with HIV, nor do they provide true measure of HIV disease incidence.

Robust representation of subpopulations can be obtained by the many different data sets utilized in the analyses presented in this document. However, demographic and geographic subpopulations are disproportionately sensitive to differences and changes in access to health care, HIV testing patterns, and specific prevention programs and services. Since all these issues need to be considered when interpreting HIV data, it is important to make comparison across data sources to ensure that a complete and comprehensive picture is obtained.

The most current analysis available for each data source is presented in this document. One of the strengths of the profile is that the majority of the datasets used in this document is standardized by the CDC and are comprehensive in terms of data collected.

Strengths: Reports from Mississippi's HIV and AIDS Reporting System (HARS) indicate that >85 percent of HIV/AIDS cases were reported within 2 months of diagnosis. Also HIV/AIDS reports indicate that core data variables including age, race/ethnicity, and gender are >85 percent complete. MSDH implemented HIV incidence surveillance in 2005. HIV incidence surveillance involves completion of a questionnaire of HIV testing history and submitting a blood specimen for the Serologic Testing Algorithm for Recent HIV Serology (STARHS) to determine on a population basis if the individual is newly infected (< 6 months of exposure).

Limitations: Incomplete HIV or CD4+ T-cell testing may interfere with the representativeness of reporting. Further, the widespread use of HAART complicates the interpretation of AIDS case surveillance data and estimation of the HIV/AIDS epidemic in an area. Newly reported AIDS cases may reflect treatment failures or the failure of the health care system to halt progression of HIV infection to AIDS.

PROFILE PREPARATION

This profile was prepared by the Mississippi State Department of Health, Office of STD/HIV. This profile utilized the collaboration of both Ryan White CARE Act and Prevention Programs and the Centers for Disease Control and Prevention (CDC). Data were obtained from profile data sources previously mentioned. Throughout this report, the statistical methods used to measure the effect of the epidemic upon specific populations and to account for cases with missing risk information include the following:

- ◆ Case rates were calculated for the 12-month period per 100,000 population. For these rates, denominators were derived from 2006 population estimate data. The numerator is the number of cases that were reported during the 12-month period.
- ◆ Nationally, HIV/AIDS data are presented as trends by the CDC, and the data are adjusted to account for reporting delays of recently diagnosed cases. Reporting delay refers to the time between the diagnosis of a case and receipt of the report by the health department. Cases recently diagnosed may not yet have been reported; therefore, for recent periods, the number of cases diagnosed, but not yet reported, is estimated and presented as expected cases. This is not the case in Mississippi; the date of report is measured to count a case as an alternative of the date of diagnosis.
- ◆ HIV/AIDS cases which are reported with missing risk information are assigned to the No Identified Risk Category (NIR).

ORGANIZATION OF PROFILE

The epidemiologic profile is organized into two main sections, within the four key questions that are addressed.

Section 1: Core Epidemiologic Questions

This section provides the reader with an understanding of the characteristics of the general population in Mississippi, the distribution of HIV disease, and gives a detailed look at persons at risk for HIV infection. The section is organized around three key questions:

Question 1: What are the sociodemographic characteristics of the general population in Mississippi? The answer to this question orients the reader with the overall demographic and socioeconomic characteristics of the general population of Mississippi.

Question 2: What is the scope of the HIV/AIDS epidemic in Mississippi? The answer to this question examines the effects of the HIV/AIDS epidemic and the population groups in Mississippi in order to help planners focus on prevention and care services.

Question 3: What are the indicators of risk for HIV/AIDS infection in Mississippi? The answer to this question provides a detailed look at high-risk populations. Direct measures of risk behaviors associated with HIV transmission and indirect measures that may serve as indicators of high-risk behavior are examined.

Section 2: Ryan White HIV/AIDS CARE Act Special Questions and Considerations

This section focuses on questions that pertain to HRSA HIV/AIDS care planning groups. Section 2 describes access to, use of, and standard of care among persons in Mississippi who are HIV-infected. It is organized around one key question:

Question 1: What are the patterns of utilization of HIV services of persons in Mississippi? The answer to this question characterizes the patterns in the use of services by a number of the populations living with HIV/AIDS in Mississippi. Information is provided from HRSA-funded programs.

CORE EPIDEMIOLOGIC QUESTIONS

Question 1: What are the sociodemographic characteristics of the general population in Mississippi?

Question 2: What is the scope of the HIV/AIDS epidemic in Mississippi?

Question 3: What are the indicators of risk for HIV/AIDS infection in Mississippi?

Question 1

What are the sociodemographic characteristics of the general population in Mississippi?

Summary

Population:

In the 2006 census population estimate, there were 2,910,540 people living in Mississippi. Mississippi is comprised of 82 counties. The population sizes of the counties range from 1,805 (Issaquena County) to 249,012 (Hinds County). The Jackson Metropolitan Statistical Area (MSA), which is comprised of Hinds, Madison, Rankin, Copiah, and Simpson, makes up approximately eighteen percent of the total population of Mississippi. The state is considered rural with approximately fifty one percent of its population residing in rural areas. Mississippi's other four MSAs are Gulfport-Biloxi (Hancock, Harrison and Stone Counties), Memphis (De Soto, Marshall, Tate, and Tunica Counties), Pascagoula (George and Jackson Counties), and Hattiesburg (Forrest, Lamar, and Perry Counties). Respectively, the MSAs are ranked from largest to smallest with population ranging from 529,456 to 134,744. There are five counties in Mississippi with population greater than 100,000. They are Hinds, Harrison, De Soto, Rankin, and Jackson Counties. They are ranked from largest to smallest with population ranging from nearly 250,000 to 130,577.

Public Health District Structure:

The Mississippi State Department of Health (MSDH) is divided into nine distinct public health districts (see map Appendix B). Each district is comprised of 6 to 11 counties and varies in population size. District activities include, but are not limited to, maternal and child health, family planning, STD/HIV screening and treatment, and immunizations.

Demographic Composition:

According to 2006 population estimates, the racial and ethnic composition was estimated to be fifty-nine percent white, thirty-seven percent African American, two percent Hispanic, and two percent Asian, American Indian, and Alaska Native or Pacific Islander.

Age and Sex:

In 2006, the median age of Mississippi residents was 35.3 years. Twenty-nine percent of the population was younger than 20 years of age. Twelve percent of the population was 65 or older. The proportion of males in the overall population was slightly lower than the proportion of females (48 % vs. 52 %).

Poverty, Income, and Education:

According to the 2000 census, the median household income in Mississippi was \$31,330. However, over 500,000 residents (20% of the population) for whom poverty status was determined had incomes that fell below the federally defined poverty level, compared to 13% nationally. Thirty-seven percent of all children 18 years or younger were living in poverty in

2000. Among families, sixteen percent had incomes below the poverty level, however in families with a female head of household (no husband present), forty percent had incomes below the poverty level. The unemployment rate in 2000 was four percent statewide and seventy-three percent of Mississippi residents aged 25 years and older reported educational attainment of high school diploma or higher.

Public Aid:

According to 2006-2007 data from The Kaiser Family Foundation, twenty percent of Mississippians had no health insurance, compared to fifteen percent nationally. Nineteen percent of Mississippians were covered by Medicaid and ten percent were covered by Medicare. Approximately 302,000 children 18 years of age or younger rely on Medicaid for their health needs.

Demographics

In 2006, the population in the state of Mississippi was 2,910,540 people (Table 1). The largest proportion of the population was 18-64 years of age (61%). The age distribution among males and females was similar; however, there was a slightly higher proportion of women in the older age group (65 years and over).

Table 1. Percent distribution of the general population, by age group and sex: Mississippi, 2006

Age (years)	Males, % (n=1,409,345)	Females, % (n=1,501,192)	Total, % (N=2,910,540)
Less than 18	13	13	26
18-64	30	31	61
≥ 65	5	7	12

Source: U.S. Census Bureau 2006 Population Estimates
Note: Percentages may not add up to 100% due to rounding.

Nearly sixty percent of men and women in Mississippi reported themselves as non-Hispanic whites (Table 2). Non-Hispanic African Americans made up over thirty percent and Hispanics make up two percent of the population. American Indians or Alaska Natives and Native Hawaiians or other Pacific Islanders made up less than one percent of Mississippi's population.

Table 2. Percent distribution of the general population, by race/ethnicity and sex: Mississippi, 2006

Race/Ethnicity	Males, % (n=1,409,345)	Females, % (n=1,501,192)	Total, % (N=2,910,540)
White, Non-Hispanic	60.0	58.7	59.3
African American, Non-Hispanic	36.0	37.9	37.0
Hispanic, all races	2.2	1.5	1.8
Asian	0.7	0.7	0.7
American Indian or Alaska Native	0.4	0.4	0.4
Native Hawaiian or other Pacific Islander	0.0	0.0	0.0

Source: U.S. Census Bureau 2006 Population Estimates
Note: Percentages may not add up to 100% due to rounding.

Mississippi is divided into nine public health districts. The West Central Public Health District (District V) has the largest population and the Southwest Public Health District (District VII) has

the smallest population. The race distribution varies from each district. When looking at whites, the numbers ranged from nearly thirty percent in the Delta Hills Public Health District (District III) to nearly eighty percent in the Northeast Public Health District (District II) (Table 3). Nineteen percent of the Coastal Plain Public Health District (District IX) residents reported themselves as African American and sixty-four percent of residents in the Delta Hills Public Health District (District III) reported themselves as African American.

Table 3. Percent distribution of the general population, by race/ethnicity and public health district: Mississippi, 2006

Public Health District	Race/ethnicity				Total Population
	White %	AA %	Hispanic %	Other %	
District I	60.1	35.9	2.4	1.6	305,044
District II	75.9	21.0	1.8	1.3	345,116
District III	33.0	64.4	1.5	1.1	236,927
District IV	56.4	40.5	1.6	1.6	245,034
District V	49.2	47.8	1.5	1.5	625,836
District VI	57.6	36.7	2.0	3.6	242,727
District VII	54.5	46.8	0.8	0.9	177,438
District VIII	66.6	30.1	1.9	1.4	295,010
District IX	75.2	18.7	2.5	3.6	437,408

Source: U.S. Census Bureau 2006 Population Estimates

Note: Percentages may not add up to 100% due to rounding.

The distribution of race/ethnicity differed in Metropolitan Statistical Areas (Table 4). Statewide, the distribution of whites far outnumbers any other race/ethnicity. This holds true for all MSAs within the state, with the exception of the Jackson MSA. The Jackson MSA, the most populous MSA in the state, has a nearly even distribution of whites and African Americans (50% compared to 47%). Pascagoula, Memphis, and Gulfport-Biloxi MSAs all have similar distribution of Hispanics. Similarly, the Gulfport-Biloxi MSA represented the highest proportion of Asians and other races (Native Hawaiian/Pacific Islander and American Indian/Alaska Native).

Table 4: Percent distribution of the general population, by race/ethnicity for MSAs compared with population of Mississippi, 2006

Race/Ethnicity	Hattiesburg MSA (n=134,744)	Pascagoula MSA (n=152,405)	Memphis MSA (n=217,701)	Gulfport- Biloxi MSA (n=227,904)	Jackson MSA (n=529,456)	State (n=2,910,540)
White, not Hispanic	69.6	74.5	67.5	73.3	50	59.3
African American, not Hispanic	27	20.2	27.6	19.5	46.5	37.0
Hispanic	1.5	2.5	3	2.7	1.4	1.8
Asian	1	1.5	1	2.2	1	0.7
Other	<1	1.3	<1	2.3	1.1	1.2

Source: U.S. Census Bureau 2006 Population Estimates
Note. Percentage may not add up to 100% because of rounding.

Socioeconomic Status

In 2000, the highest proportion of persons living below the poverty level during the last 12 months was less than 25 years of age (Table 5). Among the 25 and younger age group, fifty-eight percent of individuals living below the poverty level were males and forty-six percent were females. Statewide, there were more women living below the poverty level than men.

Table 5. Percent distribution of persons living below the poverty level during the past 12 months, by sex and age group: Mississippi, 2000

Age group	Males, % (N=231,930)	Females, % (N=316,149)	Total Population, % (N=548,079)
≤24	58.4	45.8	51.3
25-44	19.4	25.2	22.8
45-64	14.5	15.2	14.9
≥64	7.7	13.7	11.2

Source: Census 2000, US Bureau of the Census.
Note. Percentage may not add up to 100% because of rounding.

The most common level of educational attainment among persons 25 years and older, regardless of location or sex, was a high school diploma or its equivalent (Table 6). Statewide, twenty-nine percent of Mississippi's population 25 years and over earned a high school diploma or its equivalent, six percent earned an associate's degree, and eleven percent earned a bachelor's degree. Similar percentages were observed in all counties, with the exception of Hinds and Rankin, where the percentage of high school graduates was lower than the statewide estimates. Yet, Hinds County had the highest proportion of persons with a Bachelor's degree.

Table 6. Percent distribution of the population 25 years or older, by educational attainment and sex, for MSAs (>100,000 population): Mississippi, 2000

County	Total Population	Percent of high school graduates	Percent with Associate's Degree	Percent with Bachelor's Degree
De Soto	68,302	34	6.5	10.3
Harrison	119,169	28.4	7.6	11.8
Hinds	150,287	21.9	6.3	17.2
Jackson	82,818	32.1	7.9	10.7
Rankin	74,885	27.4	6.8	16.3
Statewide	1,757,517	29.4	5.7	11.1

Source: Census 2000, US Bureau of the Census.

According to 2006-2007 data from the Kaiser Family Foundation, twenty-five percent of men and women aged 19-64 years reported that they did not have health insurance coverage (Table 7). This number is slightly higher than the US average. Over half (56%) of Mississippi's adults received health insurance coverage through their employer. Few persons reported coverage through individual plans; and ten percent of Mississippi adults received health insurance coverage through Medicaid. Four percent of Mississippians received health insurance from other public entities (individuals covered through the military or Veterans Administration in federally-funded programs such as TRICARE as well as some non-elderly Medicare enrollees).

Table 7. Percent distribution of adults (19-64 years), by health insurance coverage; Mississippi compared to the United States, 2006-2007

Source of insurance	Mississippi %	United States %
Employer	56%	63%
Individual plan	5%	6%
Medicaid	10%	8%
Other Public	4%	3%
None/uninsured	25%	20%

Source: 2006 and 2007 current Population survey, Kaiser Family Foundation.

SCHIP and individuals eligible for both Medicare and Medicaid (dual eligibles) are included in Medicaid.

Other Public (Federal) includes individuals covered through the military or Veterans Administration in federally-funded programs such as TRICARE (formerly CHAMPUS) as well as some non-elderly Medicare enrollees.

Question 2

What is the scope of the HIV/AIDS epidemic in Mississippi?

The HIV/AIDS epidemic has affected persons of all sex, age, racial/ethnic groups in all counties of Mississippi. The distribution of the epidemic has not been uniform across the various subpopulations of the state. Initially, the epidemic dramatically affected white men who have sex with men (MSM); however, the epidemic's current trend in Mississippi suggests that African American MSM are the leading group significantly impacted by the epidemic. African Americans are disproportionately affected by the epidemic compared to other racial/ethnic groups in Mississippi. Since 2005, there has been a steady increase in HIV disease among African American women, mainly attributed to heterosexual contact. In order to plan for HIV prevention and care and to allocate resources as the epidemic continues to change and the number of persons living with HIV disease continues to grow, it is extremely important to identify those populations most affected and most at risk for HIV infection.

This section provides detailed information about demographic and risk characteristics of HIV-infected persons and trends in the statewide epidemic. This profile provides a detailed description of the epidemic in each public health region through 2007. Unless noted, all data were obtained from the Mississippi HIV/AIDS Surveillance Program.

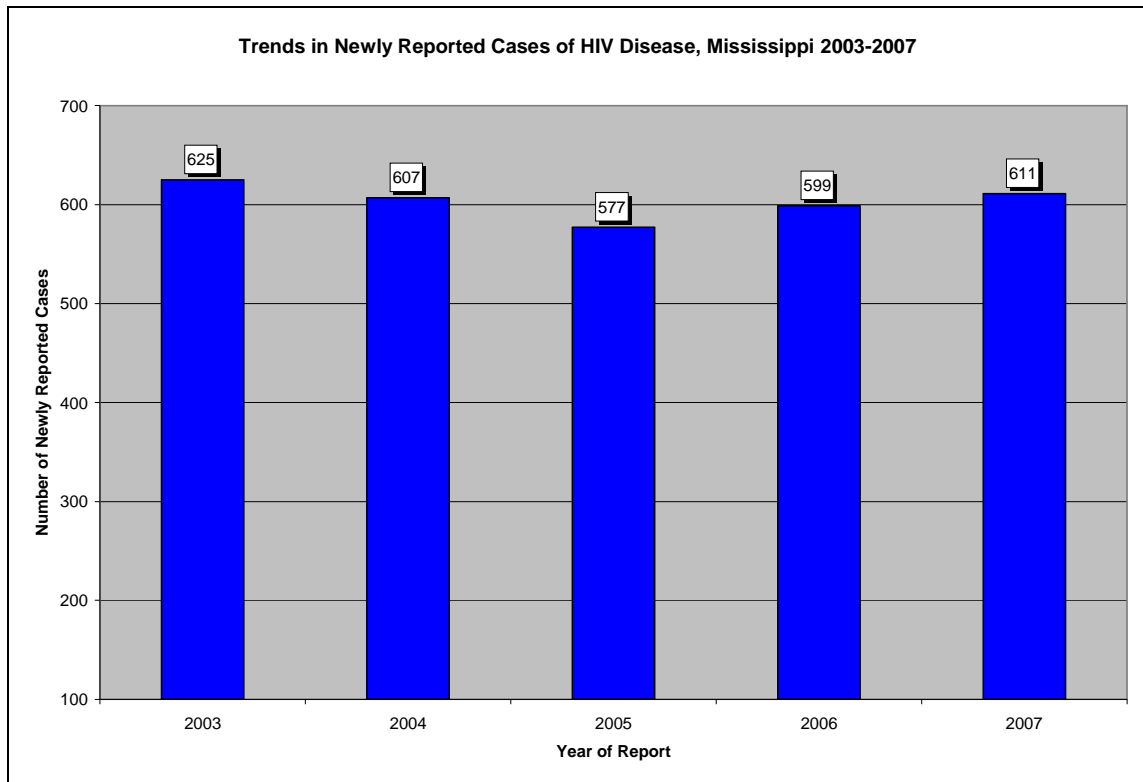
Highlights

- There are people living with HIV disease in every county in the state, and the numbers continue to increase with each year. At the end of 2007, there were a total of 8,806 persons known to be living with HIV disease in Mississippi. Of this total, 3,895 (44%) had a diagnosis of AIDS.
- In 2007, Public Health District V had the highest rate of HIV disease diagnoses (number of cases per 100,000 population in the district).
- Hispanics and African American continue to be disproportionately affected by HIV disease. In 2007, the diagnosis rate for Hispanics was five times higher than that for whites and the diagnosis rate for African American was six times higher than that for whites.
- The proportion of HIV disease diagnosis among men in Mississippi has steadily increased with time. In 2007, 68% of persons living with HIV disease were men; 69% of newly diagnosed cases were in men.
- In 2007, persons aged 25-44 years accounted for more than half (53%) of newly diagnosed cases.
- The largest proportion of cases diagnosed in 2007 (24%) was attributed to male to male sexual contact (MSM). The second highest risk category was heterosexual contact (3%). Sixty-nine percent of new cases report no risk as their mode of exposure.

Overall HIV Disease Trends

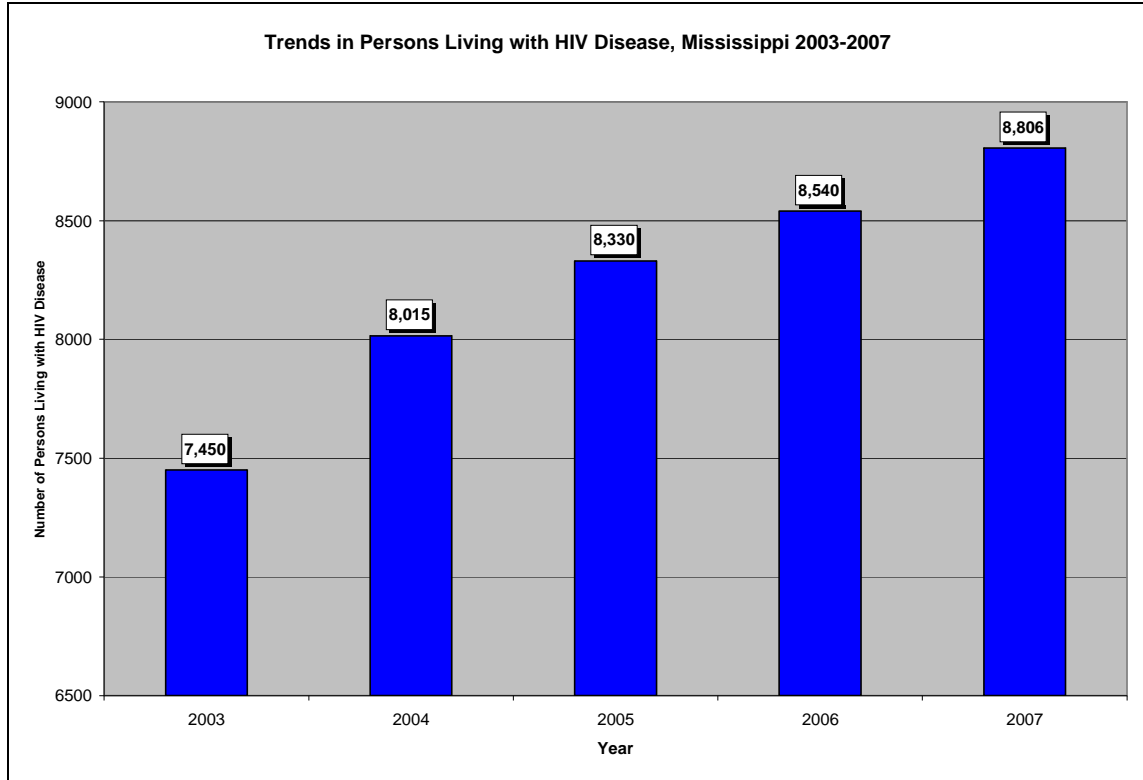
Statewide during 2003, a total of 625 new HIV disease cases were reported. HIV disease is the unduplicated number of people reported with HIV infections or AIDS who were residents of Mississippi at the time of diagnosis. At the end of 2007, Mississippi reported 611 new cases of HIV disease. This shows a slight downward trend in the incidence of HIV disease until 2006, when there was an increase from 2005 (Figure 1).

Figure 1



The number of people living with HIV disease has increased each year (Figure 2). At the end of 2007, there were a total of 8,806 people in Mississippi living with HIV disease. Of this number, approximately 44% were living with AIDS. Due to there being a large number of individual who are unaware of their status, this number is an underestimation of persons living with HIV infection. Since the introduction of effective drug treatment and therapies that often delay the progression of HIV to AIDS and from AIDS to death, we now see a trend among persons living with HIV disease.

Figure 2



In 2007, Mississippi reported 611 people with HIV disease of whom 420 (69%) were male and 191 (31%) were female. By race/ethnicity, 465 (76%) were African American, 121 (20%) were white, 19 (3%) were Hispanic, 3 (<1%) were American Indian/Alaska Native or Native Hawaiian/Pacific Islander, 2 (<1%) were Asian, and 1 (<1%) was unknown (Table 8).

The rate of newly reported cases of HIV disease in 2007 was 21 per 100,000 in Mississippi (Table 8). Minorities continue to be disproportionately affected by HIV disease. African Americans represented seventy-six percent of new HIV disease cases reported in 2007 and seventy-two percent of all persons living with HIV disease (Table 8). HIV disease rates were highest for African Americans (43.2/100,000) compared with Hispanics (35.6/100,000) and whites (7/100,000).

The proportion of new HIV disease cases reported among men in Mississippi has increased steadily. In 2007, 68% of persons living with HIV disease were men; similarly, 69% of new cases reported were men. The HIV incidence rates for males reported were two times that for females (29.8/100,000 compared with 12.7/100,000).

The majority of persons reported with HIV disease in 2007 and living with HIV disease at the end of 2007 were between the ages of 25 and 44 (Table 8). Twenty-four percent of new HIV cases were reported in older adults, ages 45-64, and twenty-one percent were in teenagers or young adults, ages 13-24. There was one report of HIV disease among infants born to HIV

infected mothers in 2007. The reduction in maternal transmission could be greatly attributed to treatment and therapies for HIV positive mothers during their pregnancies and statewide perinatal care management. This underscores the importance of HIV prevention in the area of maternal transmission.

In 2007, West Central Public Health District (District V) reported the highest number of HIV disease cases. The Delta Hills District (District III) had the second highest number of new cases (11%) (Table 8).

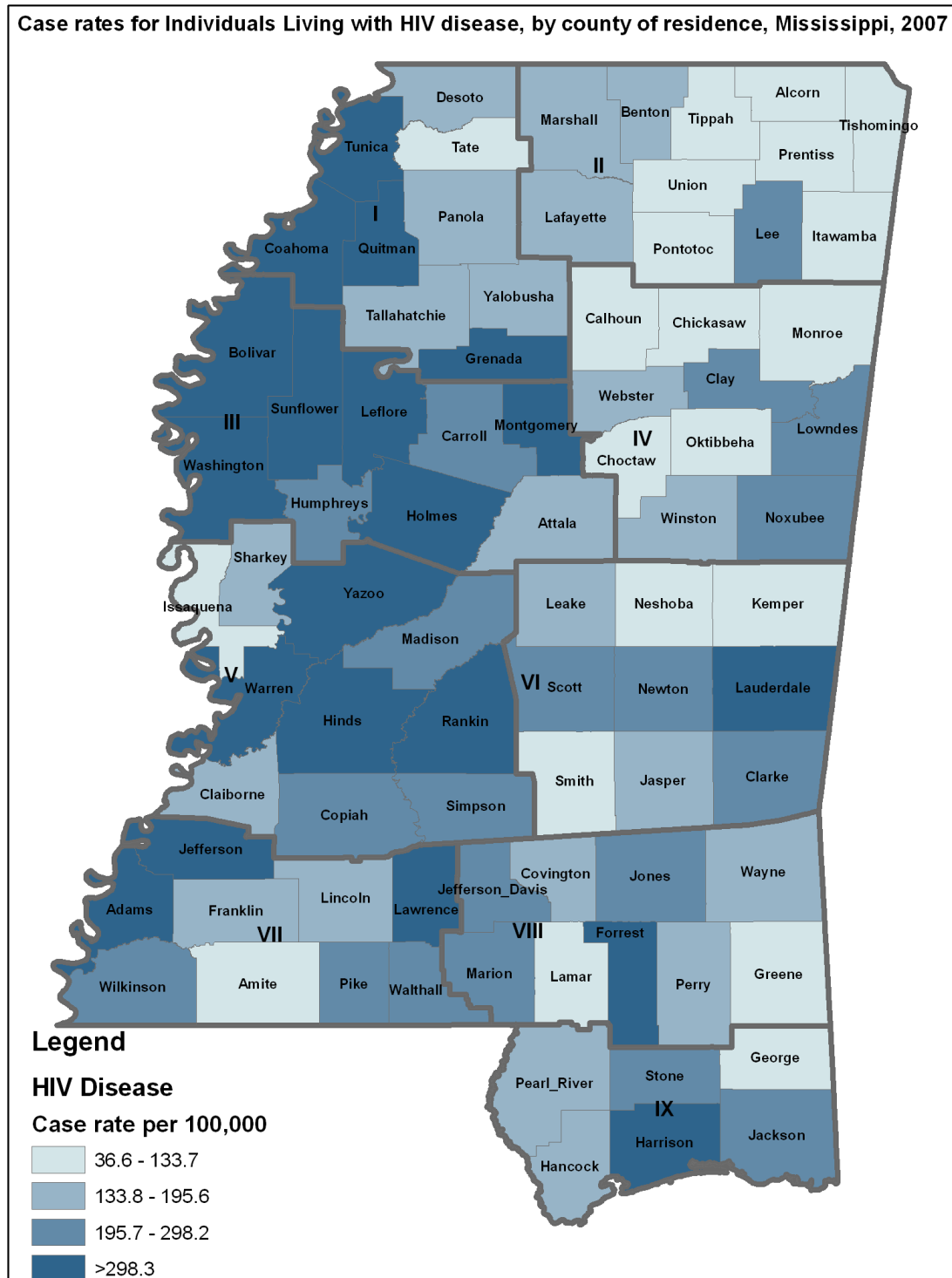
**Table 8. Characteristics of Individuals infected with HIV Disease (HIV/AIDS):
Mississippi, 2007**

	HIV/AIDS cases reported			Persons living with HIV/AIDS		
	No.	%	Rate ^a	No.	%	Rate ^a
Total	611	100	21.0	8806	100	302.6
Sex						
Male	420	69%	29.8	6012	68%	426.6
Female	191	31%	12.7	2794	32%	186.1
Unknown	0	0	-	0	0	-
Race/ethnicity						
White, not Hispanic	121	20%	7	2170	25%	125.7
African American, not Hispanic	465	76%	42.2	6370	72%	592.3
Hispanic	19	3%	35.6	146	2%	273.5
Other/Unknown	6	1%	-	120	1%	-
Age group (years)						
0-1	1	<1%	-	56	1%	63.6
2-12	0	0	-	32	<1%	7.0
13-24	131	21%	24.9	1586	18%	302.0
25-44	325	53%	42.5	5644	64%	737.9
45-64	146	24%	20.7	1410	16%	200.0
≥ 65	8	1%	2.21	78	1%	21.6
Unknown	0	0	-	10	<1%	-
Public health districts						
I	56	9%	18.4	656	7%	215.1
II	43	7%	12.5	430	5%	124.6
III	49	8%	20.7	909	10%	383.7
IV	24	4%	9.8	390	4%	159.2
V	219	36%	35.0	3549	40%	567.1
VI	34	6%	14.0	514	6%	211.8
VII	50	8%	28.2	452	5%	254.7
VIII	65	11%	22.0	734	8%	248.8
IX	71	12%	16.2	1172	13%	267.9

Note. Dash indicates the rate could not be calculated because of small numbers. ^aPer 100,000 persons (population).

At the end of 2007, there were people living with HIV disease in every county in Mississippi. There were nineteen counties that had case rates for individuals living with HIV disease that were higher than Mississippi's rates (302.6 persons per 100,000). The West Central Public Health District (District V) had the highest rates of persons living with HIV disease; prevalence rates for 4 of the 10 counties in this region were more than 300 per 100,000 (Figure 3).

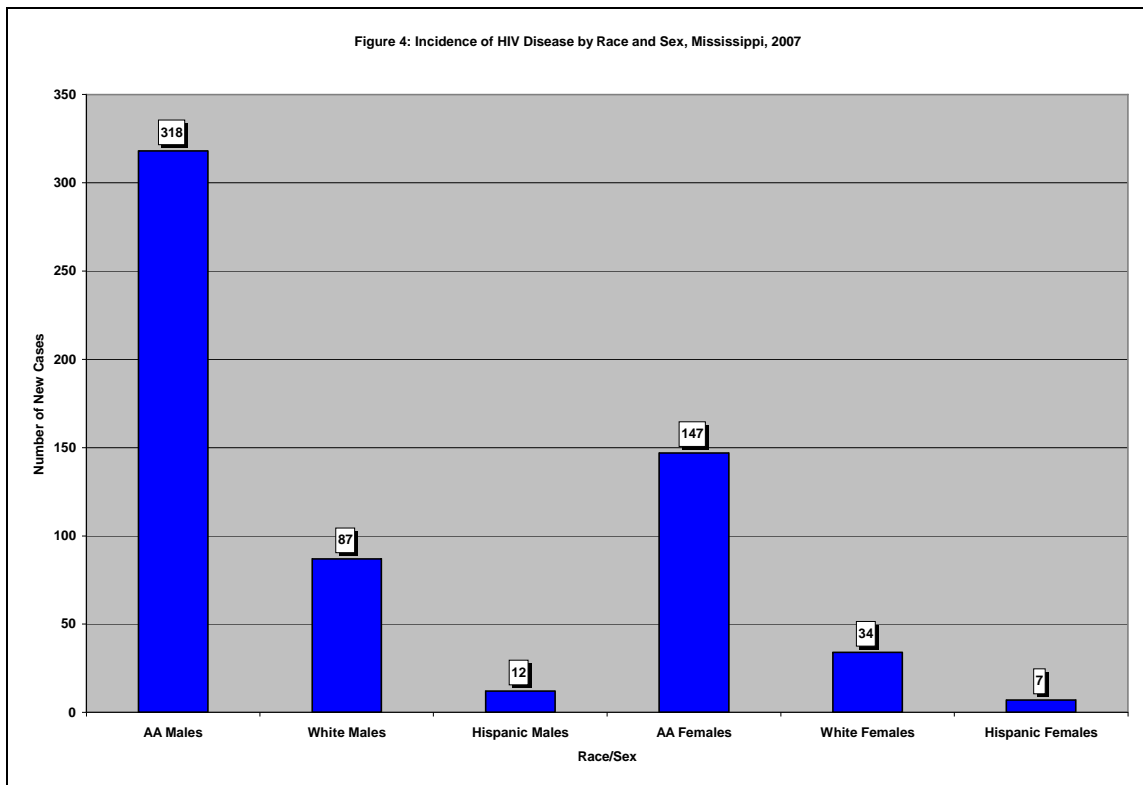
Figure 3

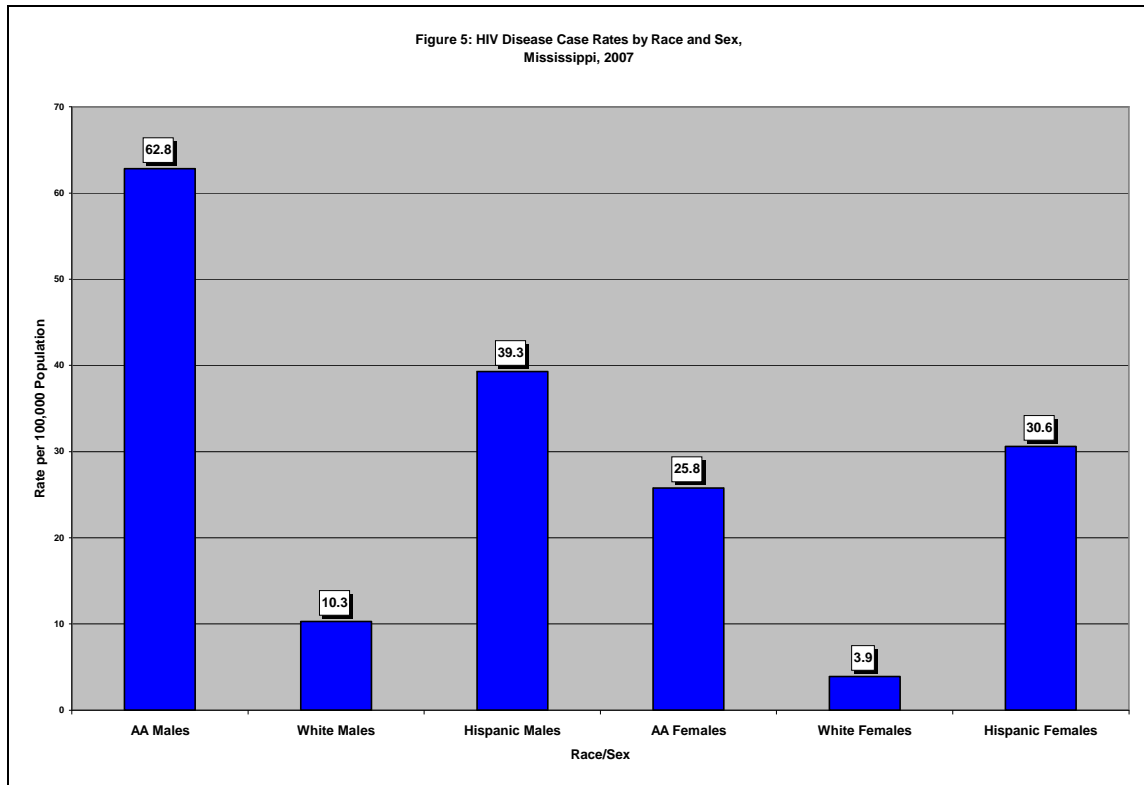


HIV Disease by Race/Ethnicity and Sex

Figures 4 and 5 show the impact of this epidemic on race and sex groups.

- African American males have the highest rate per 100,000 population and the highest number of new cases of HIV disease.
- Hispanic males have the second highest rate per 100,000 population and the fifth highest number of new cases of HIV disease. The high case rate can be attributed to the small reported population size among Hispanics in Mississippi.
- Hispanic females have the third highest rate per 100,000 population and the lowest number of new cases of HIV disease. The high rate can be attributed to the small reported population size.
- African American females had the fourth highest rate per 100,000 population and the second highest number of new cases of HIV disease.





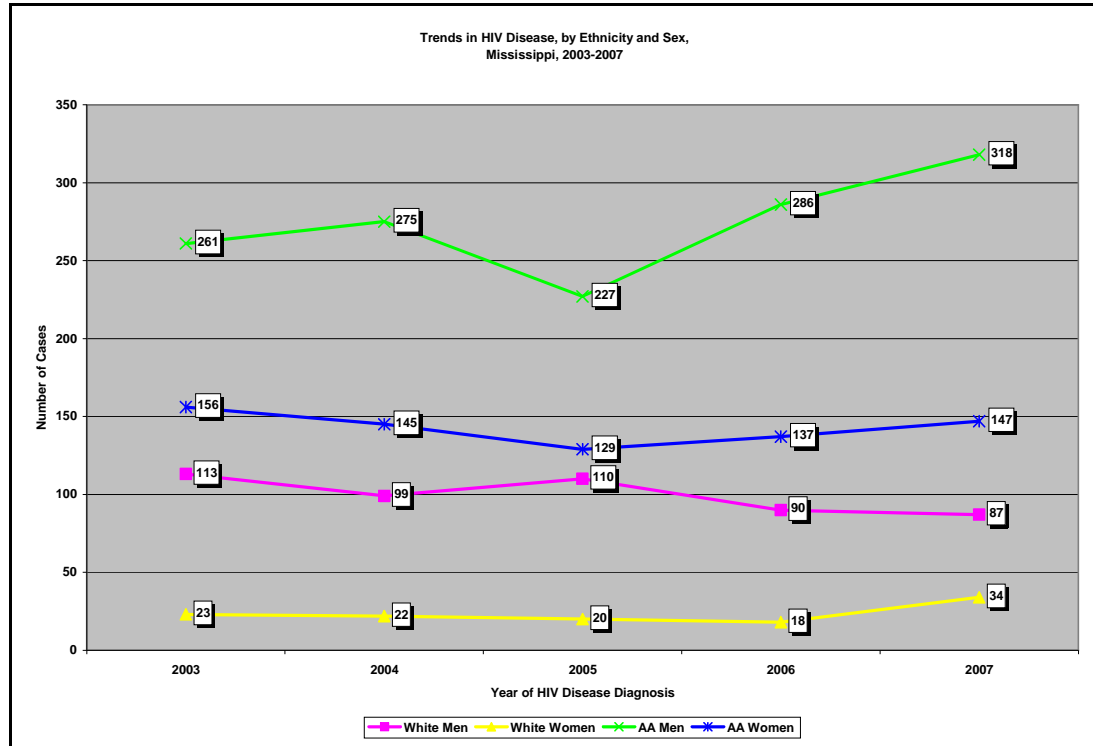
The epidemic significantly affects both males and females in both African American and Hispanic communities (Table 9). In 2007, the rate of HIV disease reported for African American males was nearly two times the rate of Hispanic males and six times the rate of white males. The rate of HIV disease reported for Hispanics males was nearly four times the rate of white males. The rate of HIV disease reported for Hispanic females was nearly eight times the rate of white females. Rates were not calculated for other ethnic groups because of the small number of cases.

**Table 9. HIV Diagnosis and Rates, by Race/Ethnicity and Sex:
Mississippi, 2007**

Race/Ethnicity	Males			Females			Total		
	No.	Percent	Rate	No.	Percent	Rate	No.	Percent	Rate
White	87	14	10.3	34	6	3.9	121	20	7
African American	318	52	62.8	147	24	25.8	465	76	43.2
Hispanic	12	2	39.3	7	1	30.6	19	3	35.6
Other/Unknown	3	<1	--	3	<1	--	6	1	--
Total	420	69	29.8	191	31	12.7	611	100	21

Overall, the number of new HIV cases reported has been on a slow decline among white men (Figure 6). Cases among white women had remained unchanged, until a recent increase from 2006-2007. Cases among African American women had also remained unchanged, but have steadily increased since 2005, and cases among African American men have increased. The annual number newly reported cases of HIV disease among African American men and women has been higher than that among white men and women since 1995.

Figure 6



HIV Disease by Age Group

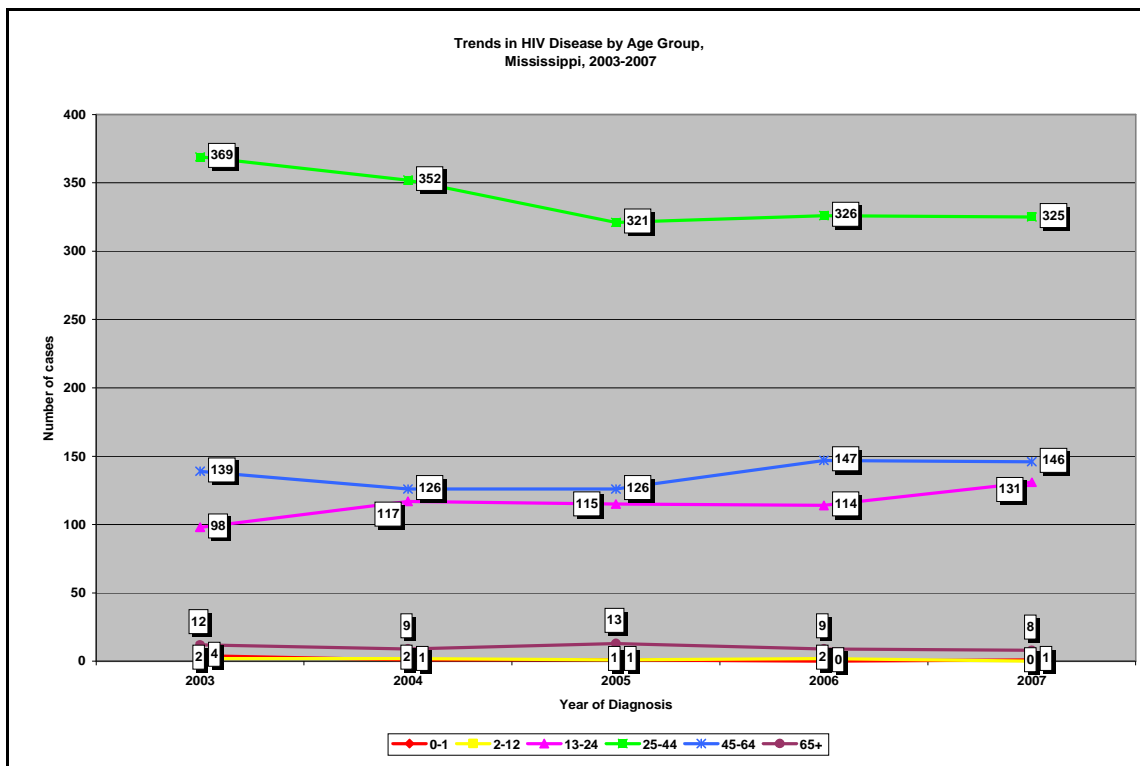
In 2007, persons aged 25-44 years accounted for over half (53%) of newly diagnosed cases (Table 10). Males accounted for a higher proportion of cases among all age groups.

Table 10. HIV Diagnosis by Age Group and Sex: Mississippi, 2007

Age group (yrs.)	Males		Females		Total	
	Number	Percent	Number	Percent	Number	Percent
0-1	1	<1	0	0	1	<1
2-12	0	0	0	0	0	0
13-24	91	15	40	7	131	21
25-44	217	36	108	18	325	53
45-64	106	17	40	7	146	24
≥ 65	5	1	3	<1	8	1
Unknown	0	0	0	0	0	0
Total	420	69	191	31	611	100

In 2007, as in past years, the highest number of newly reported cases was among persons 25-44 years of age (Figure 7). Individuals aged 45-64 have the second highest number of cases reported each year and are closely followed by 13-24 year olds. In 2007, the number of cases reported among 13-24 year olds was very close to those in the 45-64 year old age group.

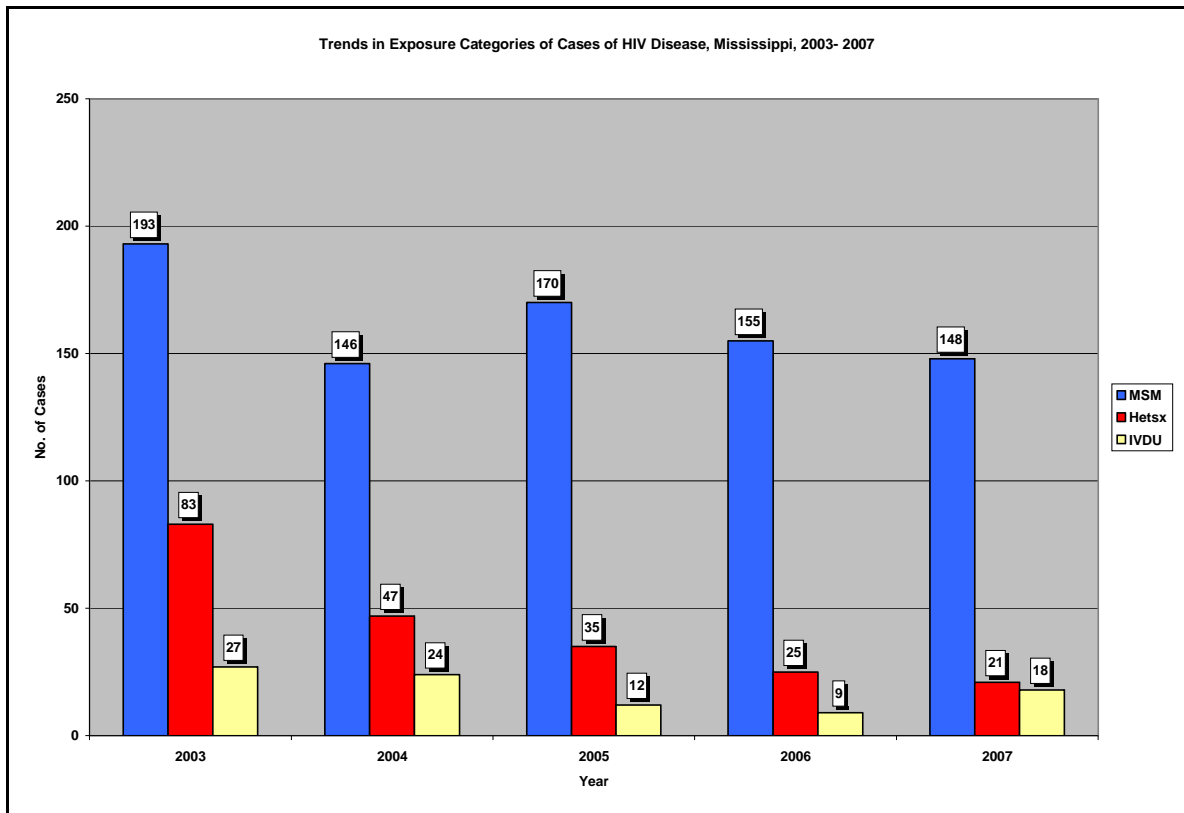
Figure 7



HIV Disease by Mode of Exposure

Below, Figure 8 shows trends in exposure categories among HIV disease cases who reported risk factors related to disease transmission. Throughout the last five years, most HIV transmission has occurred among MSM. The proportion of cases among persons who report heterosexual contact has been decreasing, in large part due to the decrease in the proportion of cases among women.

Figure 8



*Male-to-male sex includes MSM who inject drugs

The percentage of cases for each group was used in determining the ranked order of the risk behavior groups (Table 10). Men who have sex with men, heterosexual cases, and injection drug use are the top three risk categories for the spread of HIV disease.

- **Men Who Have Sex with Men (MSM):** After adjustment for unreported risk, the largest proportion of cases reported in 2007 (24%) was attributed to MSM. In addition, this category is the leader among persons living with HIV in Mississippi (32%). The proportion of men who reported MSM behavior has continued to be the highest risk.
- **Heterosexuals:** Heterosexual cases represent 3 percent of the total number of reported cases and represent 18 percent of persons living with HIV in Mississippi. The trend in

heterosexual behavior in persons diagnosed each year has decreased significantly each year, from 83 percent to 21 percent.

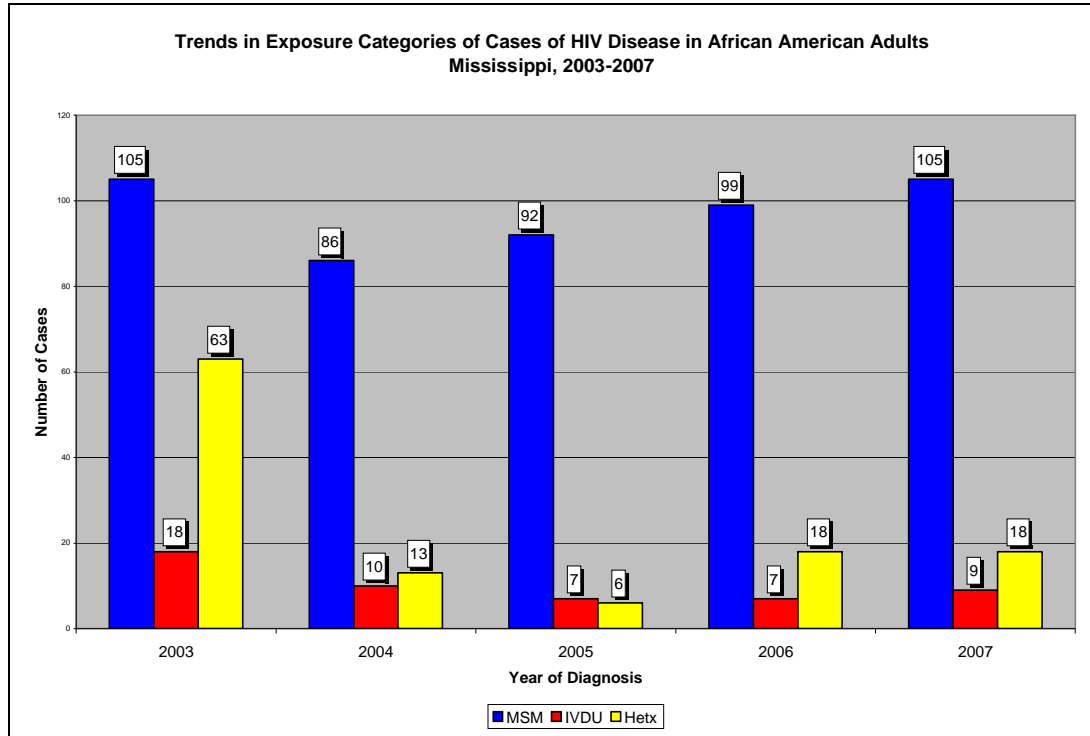
- **Injection Drug Users:** Of all HIV disease reported cases, 3 percent are injection drug users. Among persons living with HIV disease in Mississippi, 7 percent are injection drug users. The trend in injection drug use had seen a significant decrease over the past years, going from 27% to 9%, but from 2006-2007, it doubled going from 9% to 18%.

**Table 11. Risk Characteristics of Individuals with HIV Disease:
Mississippi, 2007**

Exposure category	Persons with new diagnosis		Persons living with HIV disease	
	No.	%	No.	%
Male-to-male sexual activity	145	24	2,792	32
Injection drug use	18	3	615	7
Male-to-male sexual activity and Injection drug use	3	<1	354	4
Heterosexual contact	21	3	1,546	18
Transfusion/hemophilia	0	0	42	1
Pediatric	1	<1	95	1
Risk not specified	423	69	3,361	38
Total	611	100	8,806	100

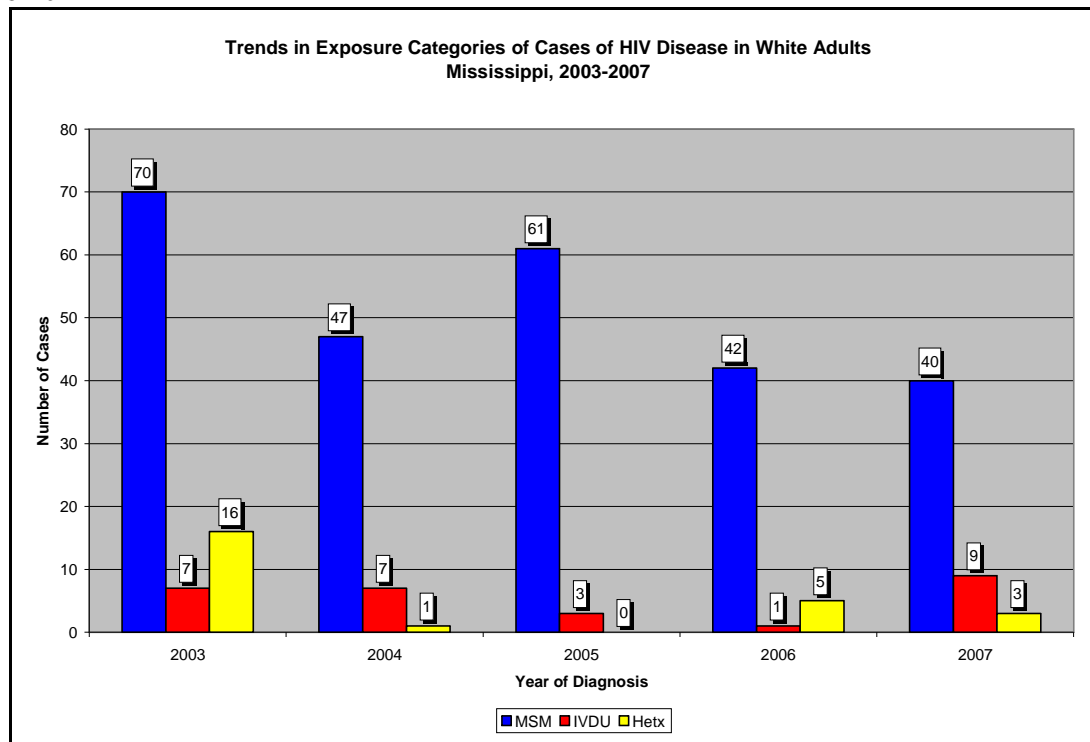
Among both African Americans and whites, the number of new cases reported among injection drug use and heterosexual sex has declined during recent years (Figures 9 and 10). Among whites, the predominant exposure remains male to male sexual activity (total of 46%, male to male sexual activity and male to male sexual activity plus injection drug use), although the proportion of new cases reported among MSM has declined during recent years (Table 11). The trend of new cases reported among MSM has remained level among African Americans. In 2007, 33% of new cases were among MSM and MSM who inject drugs (Table 11).

Figure 9



Note: Number of cases adjusted for risk distribution. Male to male sex includes MSM who inject drugs.

Figure 10



Note: Number of cases adjusted for risk distribution. Male to male sex includes MSM who inject drugs.

**Table 12. HIV Diagnosis by Exposure Category and Race/Ethnicity:
Mississippi, 2007**

	White		African American		Other/Unknown		Total	
	No.	%	No.	%	No.	%	No.	%
Male-to-male sexual activity	38	31	104	22	3	12	145	24
Injection drug use	9	7	9	2	0	0	18	3
Male-to-male sexual activity and Injection drug use	2	2	1	0	0	0	3	<1
Heterosexual contact	3	2	18	4	0	0	21	3
Transfusion/hemophilia	0	0	0	0	0	0	0	0
Pediatric	0	0	1	<1	0	0	1	<1
Risk not specified	69	57	332	71	22	88	423	69
Total	121	100	465	100	25	100	611	100

In 2007, 3% of new cases were attributed to heterosexual contact, and 69% reported no risk (Table 12). Among men, 35% reported male to male sexual activity. Injection drug use and heterosexual contact were the second most commonly reported risk among men, accounting for 2% of cases, each. No risk was specified for 60% of new cases among men.

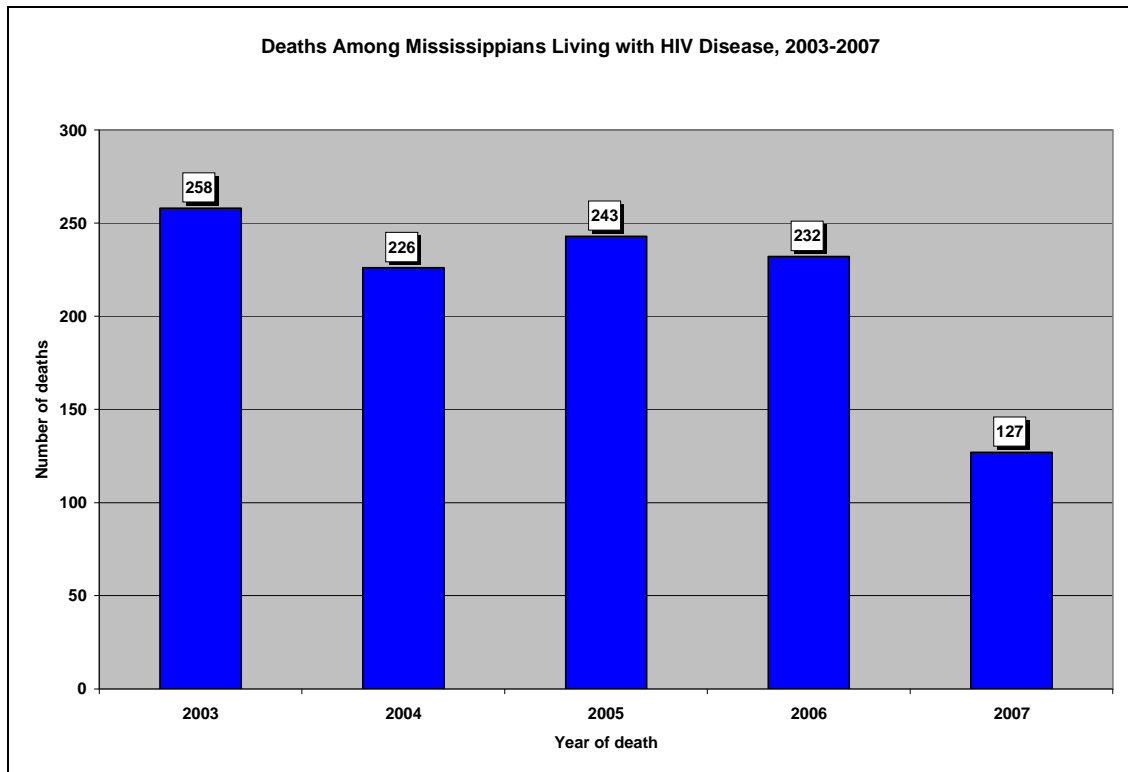
**Table 13. HIV Disease Reported by Exposure Category and Gender:
Mississippi, 2007**

	Males		Females		Total	
	No.	%	No.	%	No.	%
Male-to-male sexual activity	145	35	0	0	145	24
Injection drug use	9	2	9	5	18	3
Male-to-male sexual activity and Injection drug use	3	1	0	0	3	<1
Heterosexual contact	10	2	11	6	21	3
Transfusion/hemophilia	0	0	0	0	0	0
Pediatric	1	<1	0	0	1	<1
Risk not specified	252	60	171	90	423	69
Total	420	100	191	100	611	100

HIV Disease Mortality Trends

The mortality data that follow are drawn from both surveillance data and vital statistics data. From 2003 through 2007, the estimated number of deaths of persons with HIV disease has declined (Figure 11). Since 1996, AIDS-related mortality has declined sharply, coinciding with the emergence of Highly Active Antiretroviral Therapy (HAART).

Figure 11



In 2007, most of the persons with HIV disease who died were men (71%), which is consistent with the fact that 68% of persons living with HIV disease are male (Table 13). African Americans made up 72% of persons living with HIV disease in 2007 and represented 83% of persons who died. This disparity may indicate barriers in access to medical care and treatment. In addition, 58% of individuals who died were between the ages of 25-44. Forty three percent of HIV disease deaths were of persons living in the West Central Public Health District (District 5), while 40% of persons living with HIV disease reside in this district.

**Table 14. Deaths Among Individuals Living with HIV Disease:
Mississippi, 2007**

	Deaths among persons with HIV disease, 2007		Persons Living with HIV disease through 2007	
	Number	Percent	Number	Percent
Sex				
Male	90	71	6,012	68
Female	37	29	2,794	32
Race/Ethnicity				
White	20	16	2,170	25
African American	106	83	6,370	72
Hispanic	0	0	146	2
Other/unknown	1	1	120	1
Age Group (years)				
0-1	0	0	56	1
2-12	0	0	32	<1
13-24	18	14	1,586	18
25-44	74	58	5,644	64
45-64	31	24	1,410	16
≥65	4	3	78	1
Unknown	0	0	0	0
Public Health District				
I	12	9	656	7
II	4	3	430	5
III	14	11	909	10
IV	4	3	390	4
V	55	43	3,549	40
VI	10	8	514	6
VII	6	5	452	5
VIII	12	9	734	8
IX	10	8	1172	13
Total	127	100	8,806	100

**Table 15. Deaths Among Individuals Living with HIV Disease by Race and Sex:
Mississippi, 2007**

Race	Males			Females			Total		
	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate
White	19	15	2.2	1	1	0.1	20	16	1.1
African American	70	55	13.8	36	28	6.3	106	83	9.8
Other/unknown	1	1	-	0	0	0.0	1	1	-
Total	90	71	6.4	37	29	2.5	127	100	4.4

Note: Dash indicates numbers suppressed because of small cell sizes or rates could not be calculated because of small numbers
Each percentage is calculated as the percentage of all deaths in 2007. Rates per 100,000 persons in racial/ethnic groups.

In 2007, the statewide death rate of a cause related to HIV disease was 4.4 per 100,000 population (Table 15). Over half (55%) of all deaths due to HIV disease were among African American men and 28 percent were among African American women. The HIV disease death rate among African Americans was nearly 10 times that among whites

In 2005, the most recent year for which these data are available, HIV was the 5th leading cause of death in Mississippi among individuals aged 35-44 and was the 6th leading cause of death in Mississippians aged 15-24 and 25-34.

Question **3**

What are the indicators of risk for HIV/AIDS infection in Mississippi?

People at greatest risk of HIV infection are generally people who engage in high-risk behaviors and live in communities where HIV prevalence is high. This section examines the trends and characteristics of populations which engage in high-risk behaviors that make them vulnerable to HIV infection. This section should aid the community planning group to understand the risks and co-morbidities for HIV infection in Mississippi.

The previous section addressed the level of HIV infection in various groups affected by HIV. This section will examine the direct and indirect measures of risk factors to acquiring HIV infection.

Highlights

- In 2007, 2.9 percent of Mississippi high school students injected an illicit drug.
- In 2007, sixty percent (59.5%) of high school students had sexual intercourse, with 13.3% reporting sexual intercourse for the first time before age 13 years.
- According to 2007 YRBS data, nearly one-quarter (22.5%) of the students had sexual intercourse with four or more people during their life.
- According to 2007 YRBS data, about 67.2% of the students who had sexual intercourse during the three months before the interview had used a condom during last sexual intercourse
- According to 1997 BRFSS data, nearly fifty percent (49.2%) of Mississippians had been tested for HIV. Of those tested, 80.1% received their HIV test results and 22.5% received counseling or talked with a health care professional about the HIV test results.
- During 2003-2007, rates for gonorrhea and chlamydia were higher for females than for males. The rates were also higher for African Americans compared to whites. Individuals aged 15-19 and 20-24 had the highest rate of gonorrhea and chlamydia infection. In addition, Districts III and V had the highest rates of infection.
- Overall in 2007, 83,144 HIV tests were performed. Sixty six percent (66%) of the tests were provided for females, 67% for African Americans, and 27% for whites. Most of the tests were performed for persons aged 25-44 years (44%) followed by persons aged 20-24 (29%).
- Among men, 94% reported sex with a female as their risk factor and 6% reported sex with a male. Ninety-nine percent (99%) of women reported sex with a male as their risk factor.

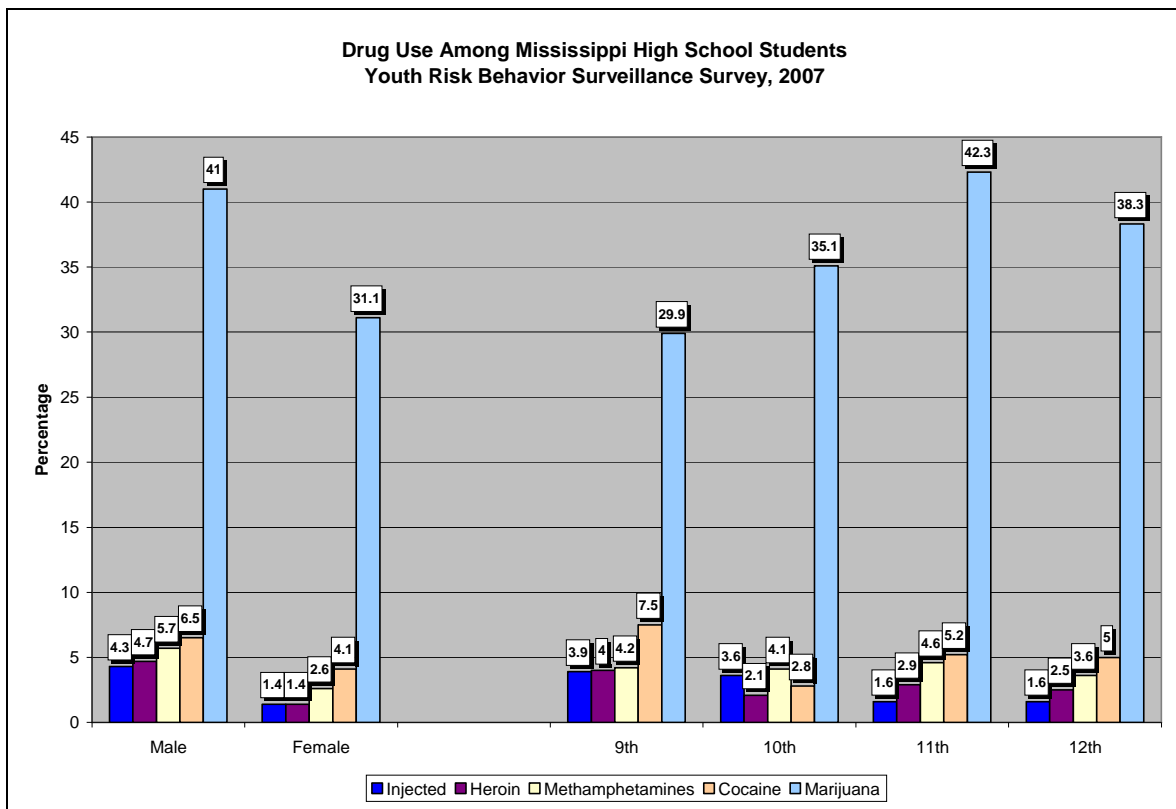
Indirect Indicators of HIV/AIDS Infection Risk

Risk Behaviors of Youth (YRBS, 2007)

Drug Use:

The Mississippi YRBS provides insight into drug use among high school students (Figure 12). The YRBS reported that 2.9 percent had ever injected an illicit drug. Experience of injecting drugs was higher among male students than female students. In addition, 3.1% of students had used heroin, 4.2% had used methamphetamines at least once, and 5.3% had used cocaine (any form). Over one third (35.9%) of the high school students in Mississippi had used marijuana.

Figure 12



Males were more likely than females to have used all drugs one or more times during their life. The numbers reported also were highest among older students. The percentage of drug use increased with grade level.

Sexual Behaviors That Result in HIV Infection, Other Sexually Transmitted Diseases, and Unintended Pregnancies:

The 2007 YRBS data for Mississippi indicates that 59.5% of the students have had sexual intercourse, with 13.3% reporting sexual intercourse for the first time before age 13 years.

Students in grade 12 (65.6%) were more likely than 9th graders (54.5%) to have had sexual intercourse. African Americans (70.0%) were more likely than whites (49.0%) to have had sexual intercourse.

Nearly one-quarter (22.5%) of the students have had sexual intercourse with four or more people during their life. The percentages were highest among males than females (29.8% vs. 15.5%), African Americans vs. whites (30.2% versus 13.8%) and older students. The 12th graders (26.8%) were more likely than 9th graders (19.4%) to have had sexual intercourse with four or more people during their lives. This suggests an increase in sexual activity by the students with increasing age or school grade. Sex with multiple partners places youth at greater risk for STD and/or HIV infection. Forty-six percent (42.3%) of students reported sexual intercourse with one or more people during the three months prior to the interview.

- Sex with Drugs: In assessing the use of alcohol or drugs while having sex, 17.6% of the students who had sexual intercourse during the past three months drank alcohol or used drugs before his/her last sexual intercourse. This behavior has been known to impair decision-making skills, especially in negotiating condom use, thus increasing the risk of STD infection for the parties concerned.
- Protected Sex: About 67.2% of the students who had sexual intercourse during the past three months used a condom during last sexual intercourse. This places the remaining 32.8% at greater risk for HIV or STD infection.
- Pregnancy Prevention: Fifteen percent (15.4%) of the students who had sexual intercourse during the past three months used birth control pills to prevent pregnancy before last sexual intercourse.

Behavioral Risk Factor Surveillance System (BRFSS, 1997)

In 1997, 70.3% of Mississippians interviewed reported no chance of getting infected with HIV. Twenty-three percent (23%) reported low risk of getting infected with HIV. Nearly fifty percent (49.2%) of Mississippians have been tested for HIV. Of those tested, 80.1% received their HIV test results and 22.5% received counseling or talked with a health care professional about the HIV test results. Although fifty-five percent (55.1%) of those interviewed believed that condoms were somewhat effective for preventing HIV infection, only 48.5% reported they always use condoms for protection. When asked if their sexual behavior has changed, due to what they now know about HIV, only 17.9% reported yes.

Indirect Measures of Risk Behavior

Sexually transmitted diseases (STD) and vital statistics data provide information that may be helpful to identify the potential occurrence of high-risk behavior. Although increases in STD or teen pregnancy rates do not directly indicate that HIV exposure is increasing, these measures may be indicative of an increase in unprotected sex, thus increasing the likelihood for HIV infection—especially if multiple and casual sexual partners are involved.

Chlamydia

Reported chlamydia cases in Mississippi have continued to increase during the past five years. There has been a 77.9% increase in the number of cases (Figure 13) from 2003-2007. During the same time period, the state-wide case rate for chlamydia increased from 424.2 to 743.0 per 100,000 population. The increase in cases has been attributed to aggressive state-wide screening for chlamydia in all Mississippi State Department of Health (MSDH) family planning, STD, and prenatal clinics beginning April 2004.

Each year, there are disproportionate numbers of chlamydia cases between females and males. From 2003-2007, the uneven balance between female and male cases narrowed. In 2003, the rate of chlamydia infections for females was nearly six times the rate for males, and in 2007, the rate for females was reduced to three times the rate for males (Figure 14). From 2003-2007, female chlamydia infections increased by 58.7% and male chlamydia infections increased by 199.8%, mainly due to the introduction of Nucleic Acid Amplification (NAAT) testing. The gender disparity in cases can be attributed to the high rate of selected screening among females in family planning and prenatal clinics.

There has been an upward trend in chlamydia cases among African Americans, Hispanics, and whites (Figure 15). When comparing all racial/ethnic groups, African Americans accounted for the highest number of chlamydia cases and rates per 100,000 population. In 2007, rates for African Americans were nearly ten times that of whites.

There was an increase in cases for all ages, except children under the age of ten and adults aged sixty and older. There was an 81.5% increase of chlamydia cases among 15-19 year olds, a 70.7% increase among 20-24 year olds, and a 99.0% increase among 25-29 year olds. During 2007, 89.6% of chlamydia infection was in 15-29 year olds (Figure 16). When comparing these age groups, the case rate of chlamydia infection for 15-19 year olds was nearly equal to the case rate of 20-24 year olds, but was two and a half times the rate of infection among 25-29 year olds.

In 2007, new cases of chlamydia were diagnosed in every county in Mississippi. Forty (49%) counties had more than the statewide case rate for chlamydia (745.1 per 100,000 population) (Figure 17). Analysis of county-specific chlamydia case rates per 100,000 population for 2007 indicate that Holmes County ranked the highest with a rate of 2,147, followed by Tunica County (1,670), Tallahatchie County (1,587), Claiborne County (1,506), and Humphreys County (1,482).

Figure 13

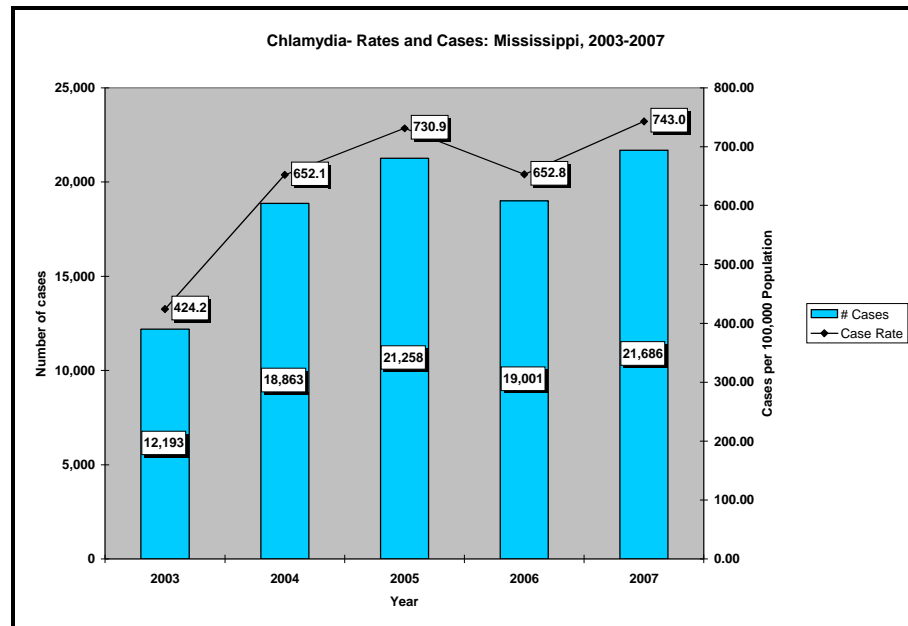


Figure 14

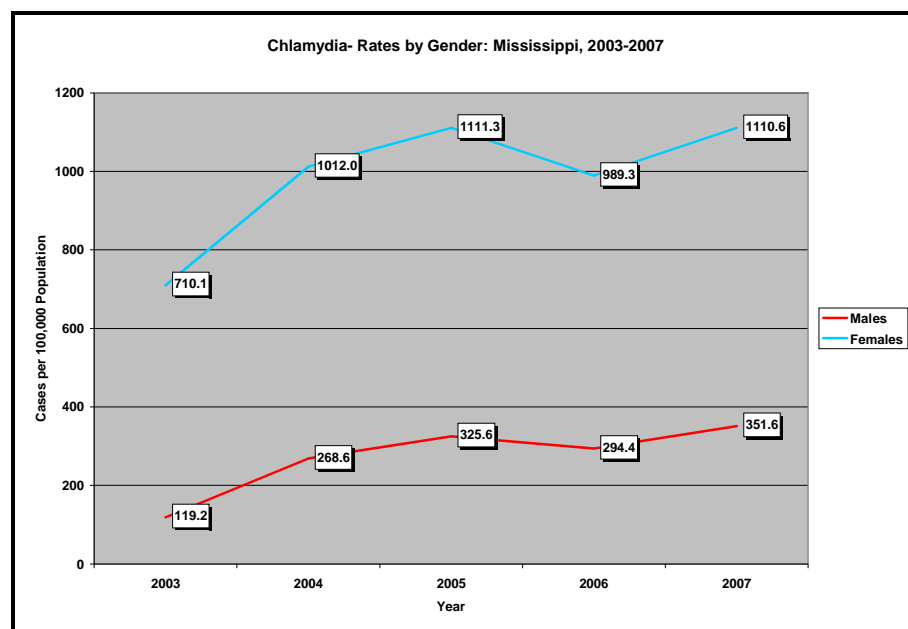


Figure 15

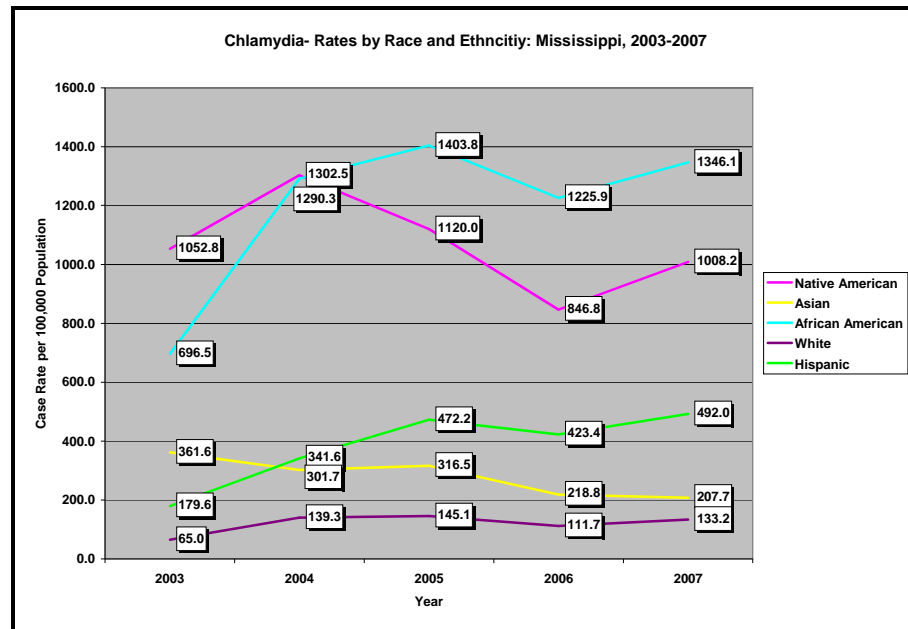


Figure 16

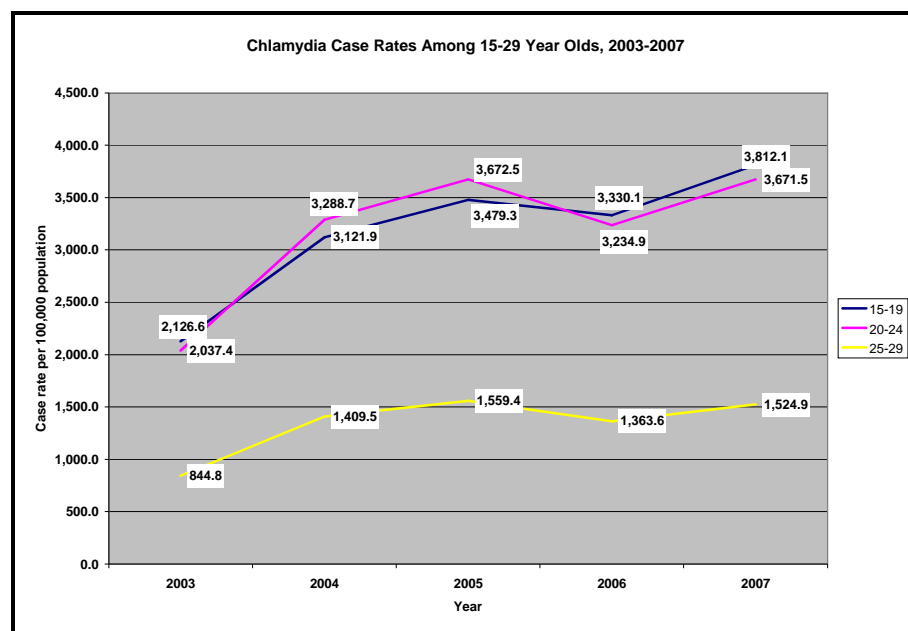
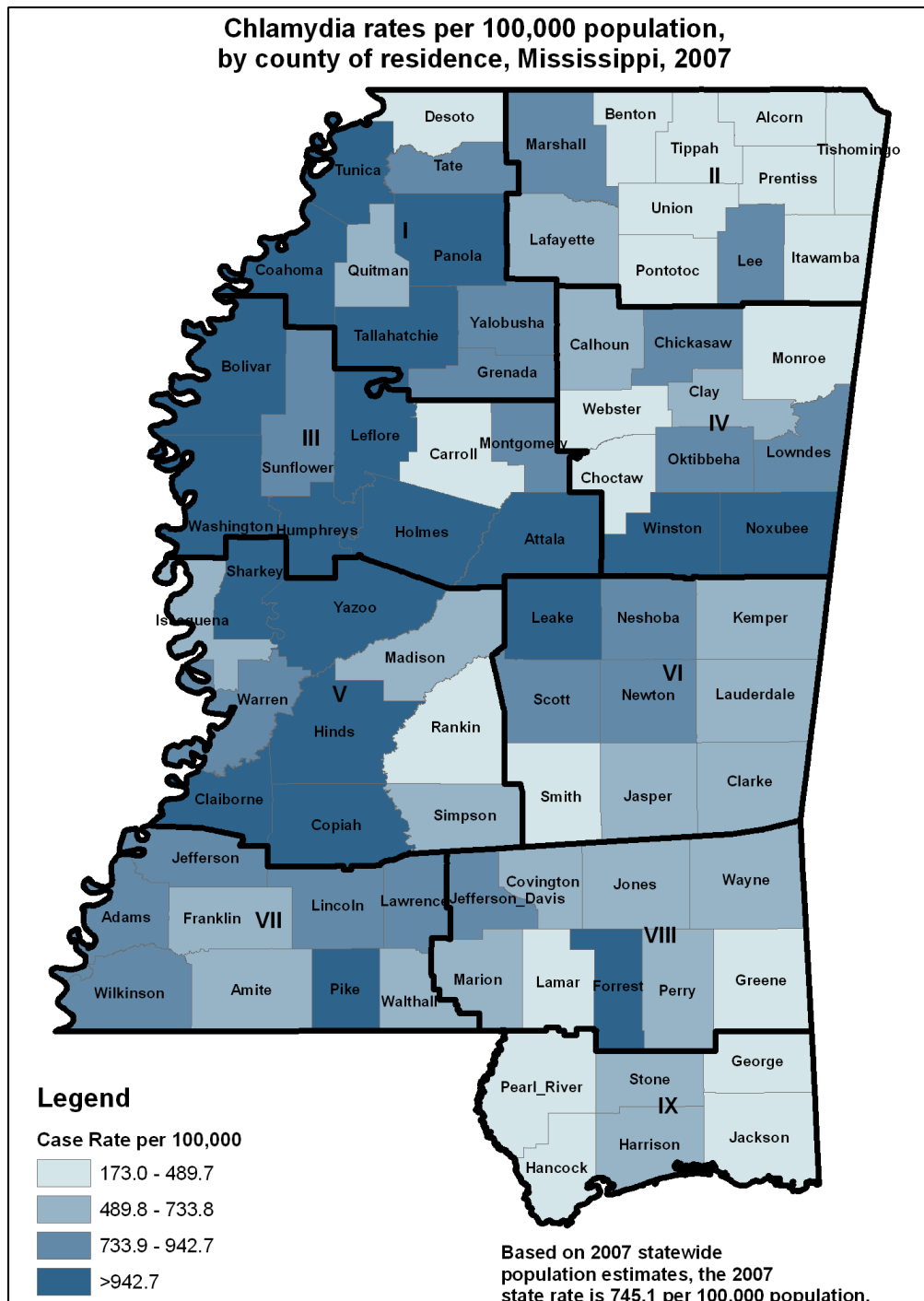


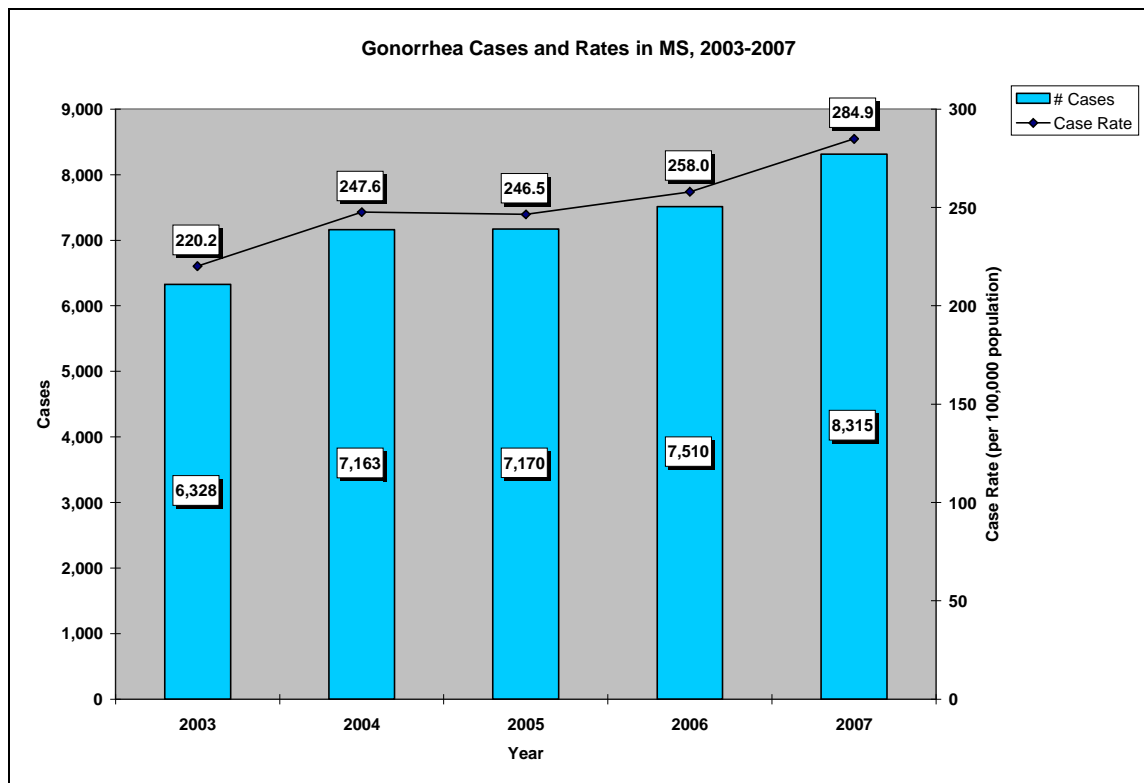
Figure 17



Gonorrhea

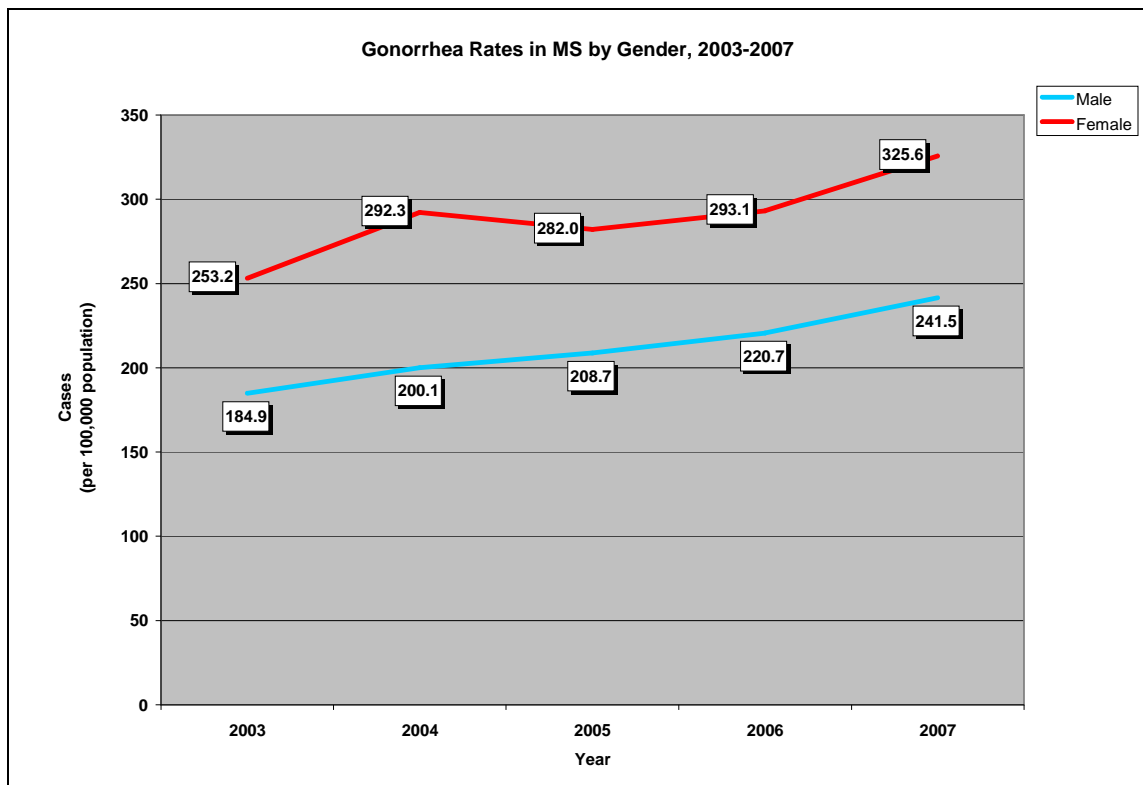
The number of gonorrhea cases has increased over the past 5 years (Figure 18). From 2003-2007, the number of gonorrhea cases increased 31.4%, from 6,328 to 8,315 cases.

Figure 18



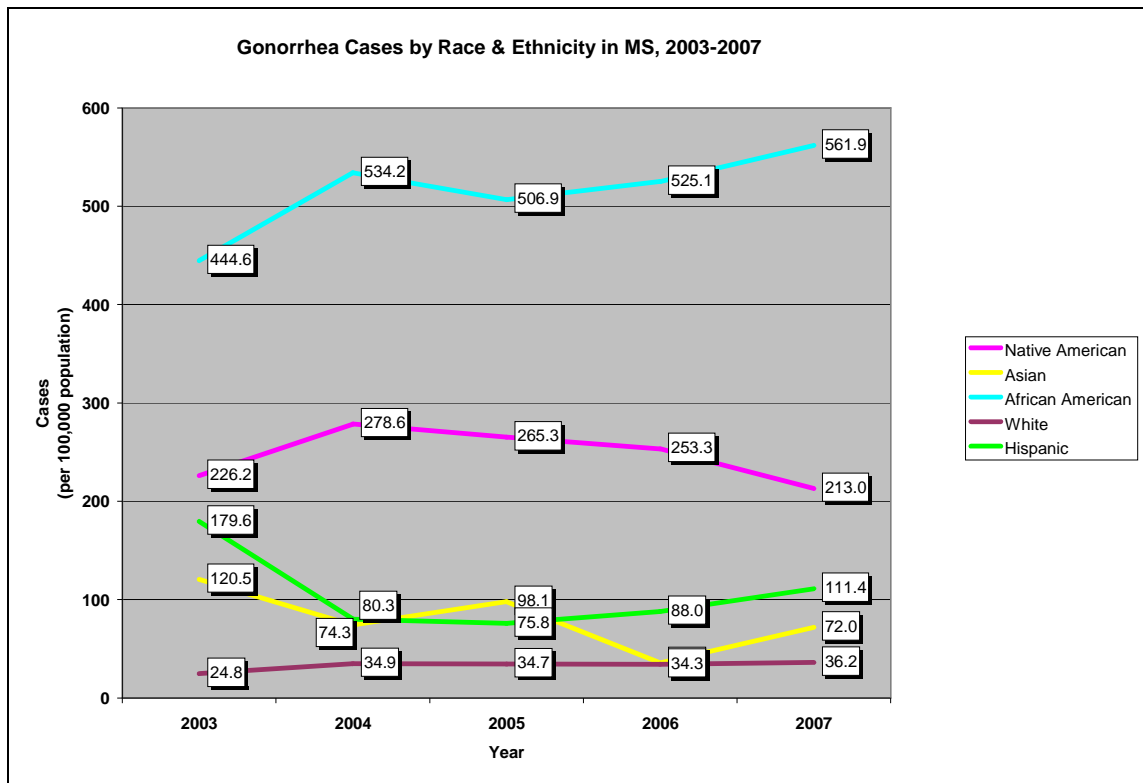
Each year, there was more gonorrhea infection among females than males. During the past five years, the trend for both males and females has slightly increased, leaving the gap between females and males unchanged. The rate of gonorrhea infections for females was nearly 1.4 times the rate for males (see Figure 19 pg 45). From 2003-2007, female gonorrhea infections increased by 30.5% and male gonorrhea infections increased by 32.7%. The disproportionate numbers between genders can be attributed to females accessing health care more frequently than males through prenatal, family planning, and other female reproductive services.

Figure 19



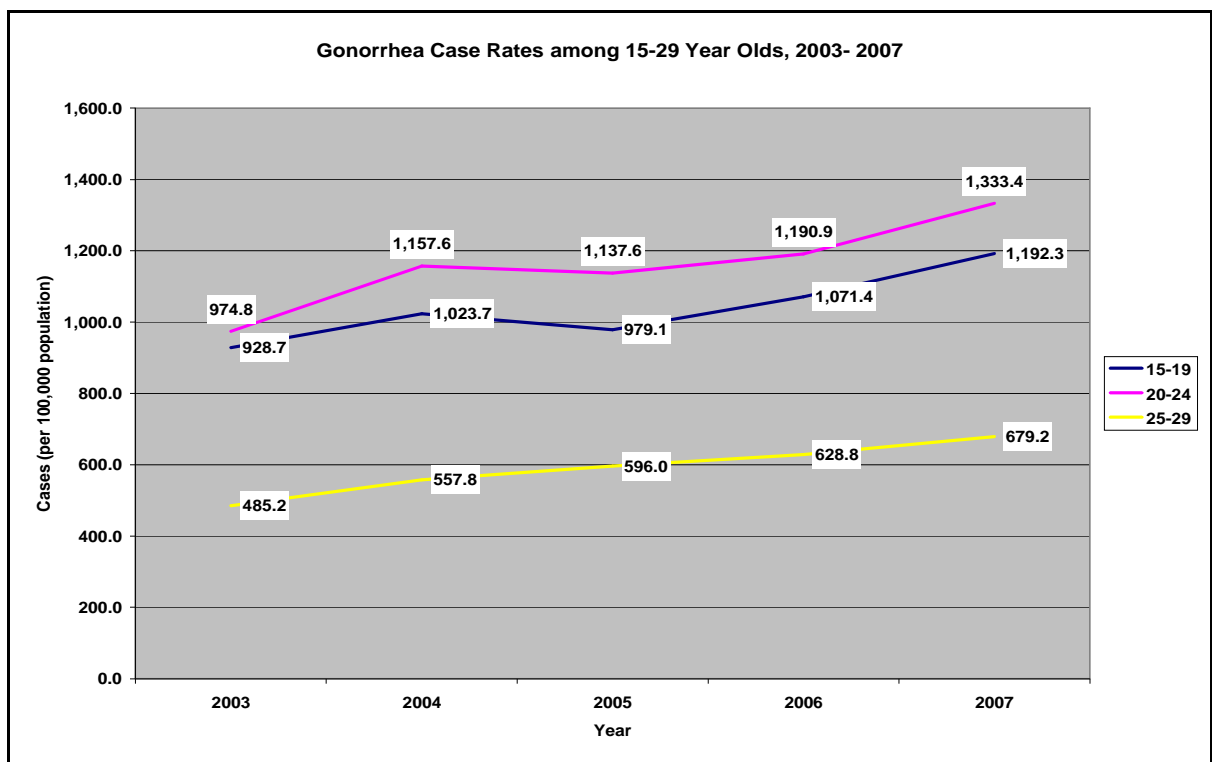
There was an upward trend in gonorrhea cases among African Americans and whites (Figure 20). African Americans' case rate of gonorrhea infection increased from 444.6 to 561.9. The case rate among whites increased from 24.8 per 100,000 in 2003, to 36.2 per 100,000 in 2007. In 2007, the rate of gonorrhea infection for African Americans was nearly sixteen times the rate for whites

Figure 20



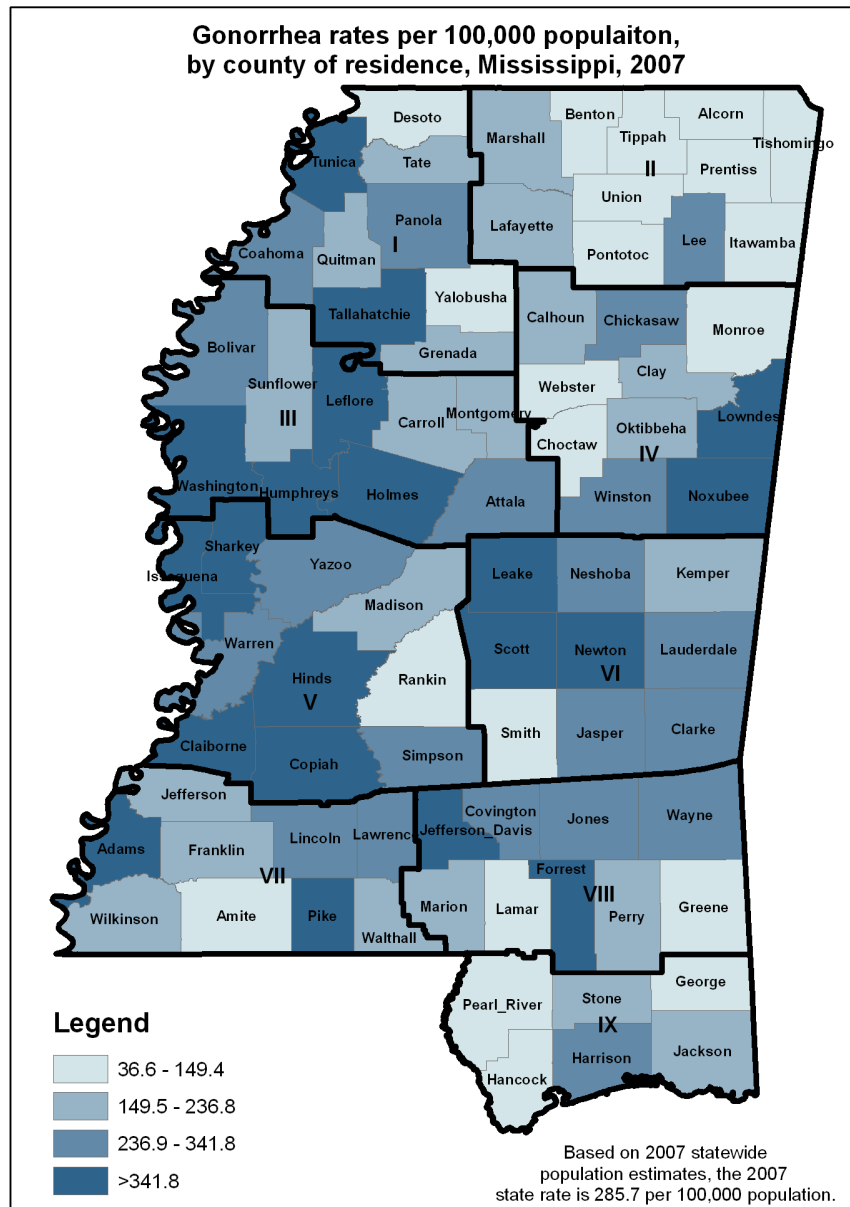
From 2003-2007, there was an increase in cases for all ages, except children and teens under the age of fifteen and no change among adults aged sixty and older. According to Figure 21, there has been an upward trend in cases for individuals aged 15-19, since 2003. There was a 30.0% increase of gonorrhea cases among 15-19 year olds, a 29.6% increase among 20-24 year olds, a 54.4% increase among 25-29 year olds, a 35% increase among 30-34 year olds, a 15.2% increase among 35-39 year olds, a 36.2% increase among 40-44 year olds, a 21% increase among 45-49 year olds, a 48.1% increase among 50-54 year olds, and a 105% increase among 55-59 year olds. During 2007, 82.8% of gonorrhea infection was in 15-29 year olds. When comparing these age groups, the case rate of gonorrhea infection for 20-24 year olds was nearly equal to the case rate of 15-19 year olds, but was two times the rate of infection among 25-29 year olds.

Figure 21



In 2007, gonorrhea was reported in every county in the state. Thirty-three counties had more than the statewide case rate (285.7) of new gonorrhea cases per 100,000 persons in the county (Figure 22 pg 49). Analysis of county-specific gonorrhea case rates per 100,000 population for 2007 indicate that Holmes County ranked the highest with a rate of 680.5, followed by Leflore County (612.6), Washington County (612), Tunica County (595.1), and Hinds County (574.3).

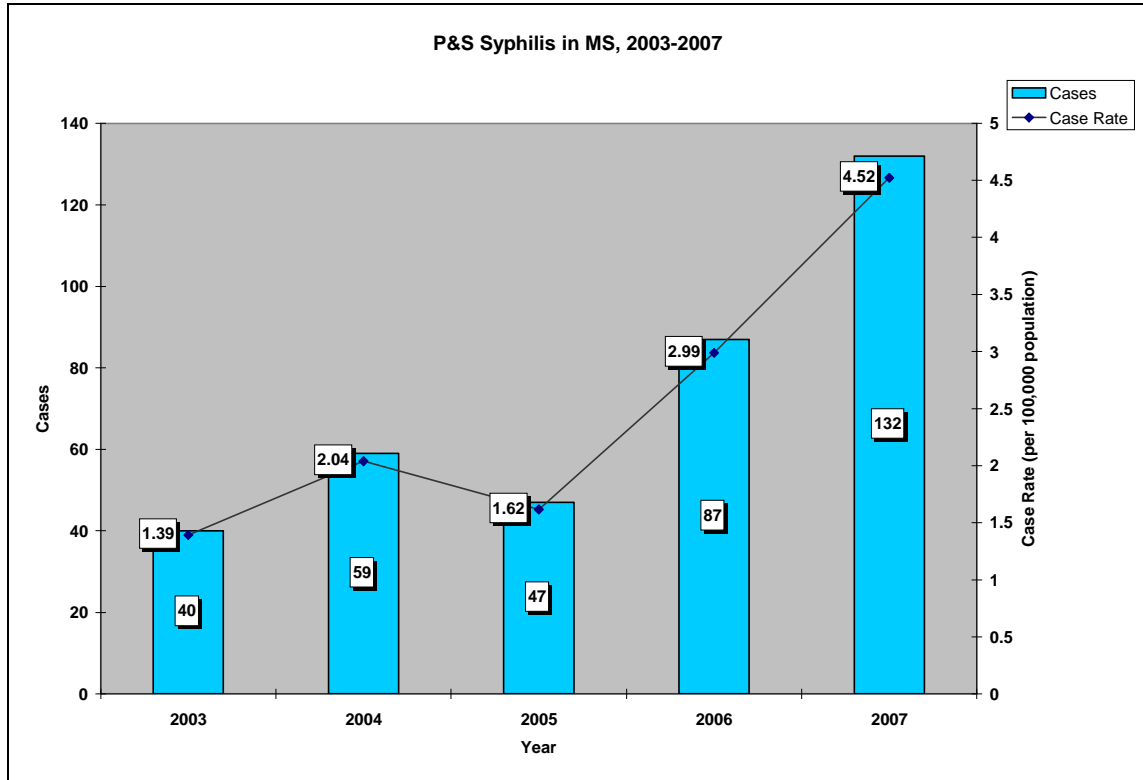
Figure 22



Syphilis-Primary and Secondary

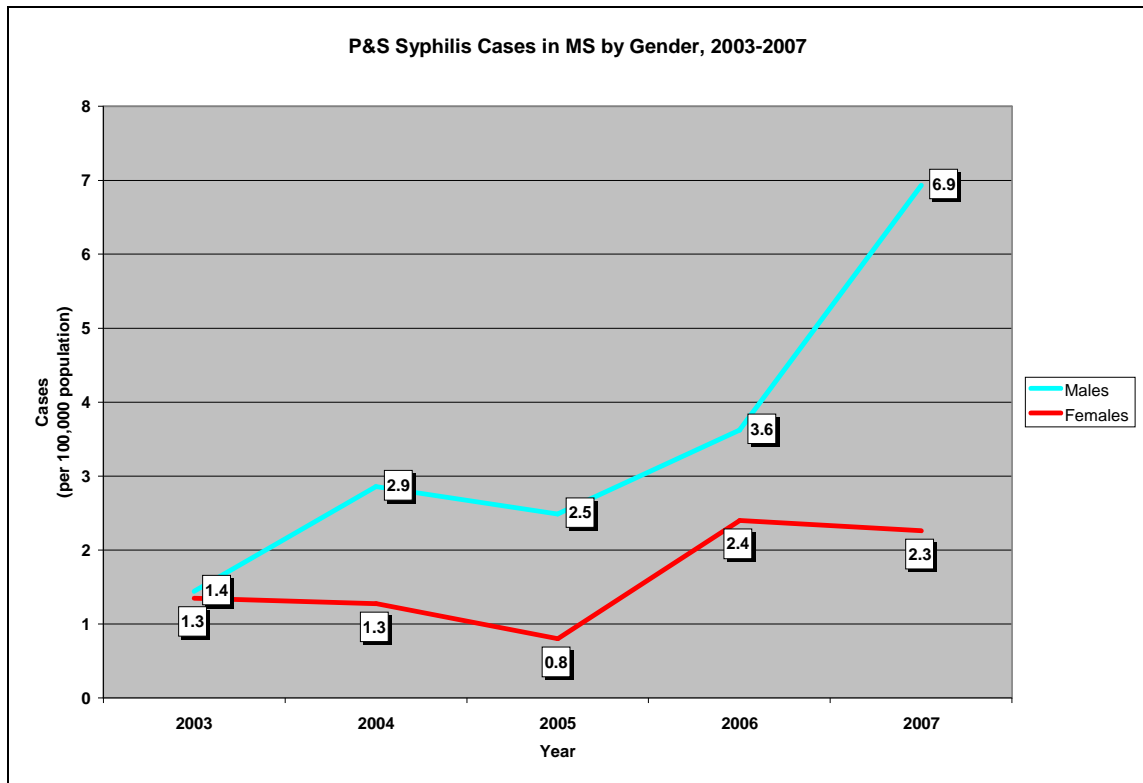
In Mississippi, Primary and Secondary (P&S) syphilis cases have demonstrated an increasing trend over the past five years, with the highest increase during 2006-2007. There were 40 (1.4 per 100,000 population) P&S syphilis cases reported during 2003 and the number increased by 229.9% to 132 cases (4.5 per 100,000 population) during 2007. Figure 23 shows the trend in cases and case rates reported between this time period.

Figure 23



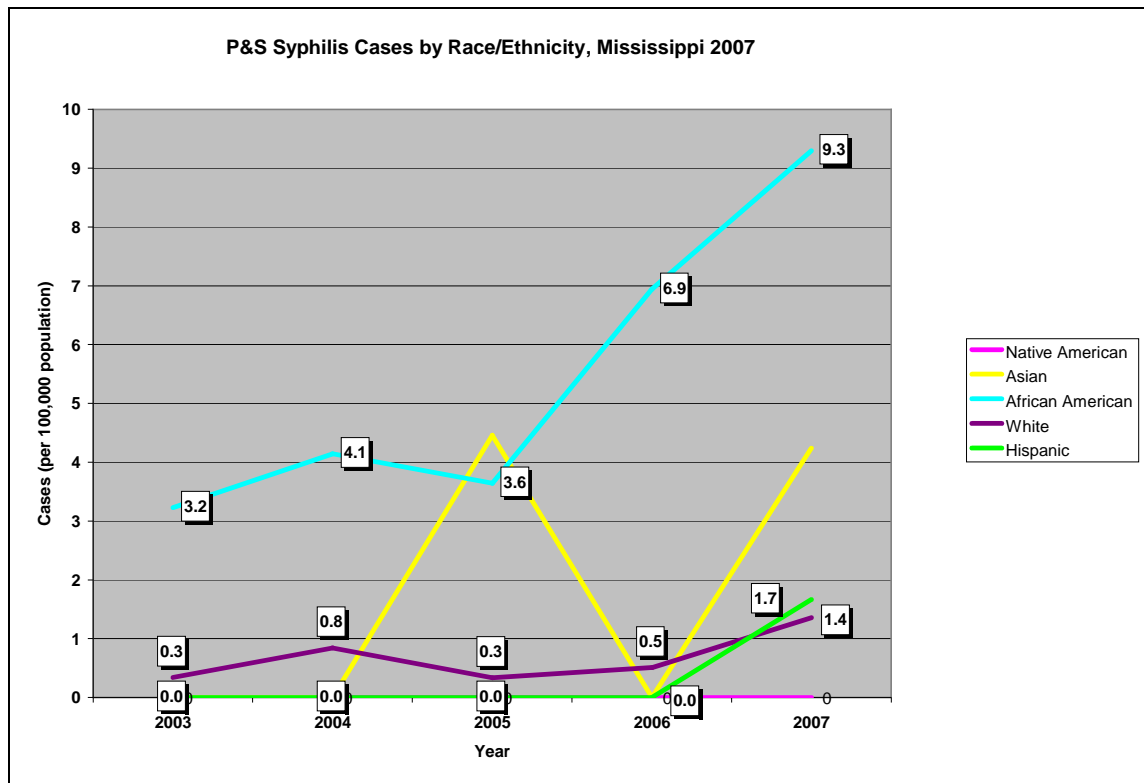
From 2003-2007, the male case rate of P&S syphilis infection increased from 1.4 to 6.9 per 100,000 population (Figure 24). The female case rate increased from 1.3 to 2.3 per 100,000 population. From 2006 to 2007, a small decline can be noted among female case rates. In 2007, the rate of male infection was three times the rate of female infection. Due to the increase of MSM syphilis, the rate of male infection continues to increase.

Figure 24



From 2003-2007, there was an increase in case rates for all racial/ethnic groups, with the exception of Native Americans (Figure 25). Whites had the most notable increase in cases/rates from 2003-2007; the number of cases increased 300.0% (from 6 to 24 cases) and the case rate increased from 0.3 to 1.4 per 100,000 population. African Americans had the second highest increase in cases/rates; the number of cases increased 197.0% during the past five years (from 34 to 101 cases) and the case rate has increased from 3.2 to 9.3 per 100,000 population.

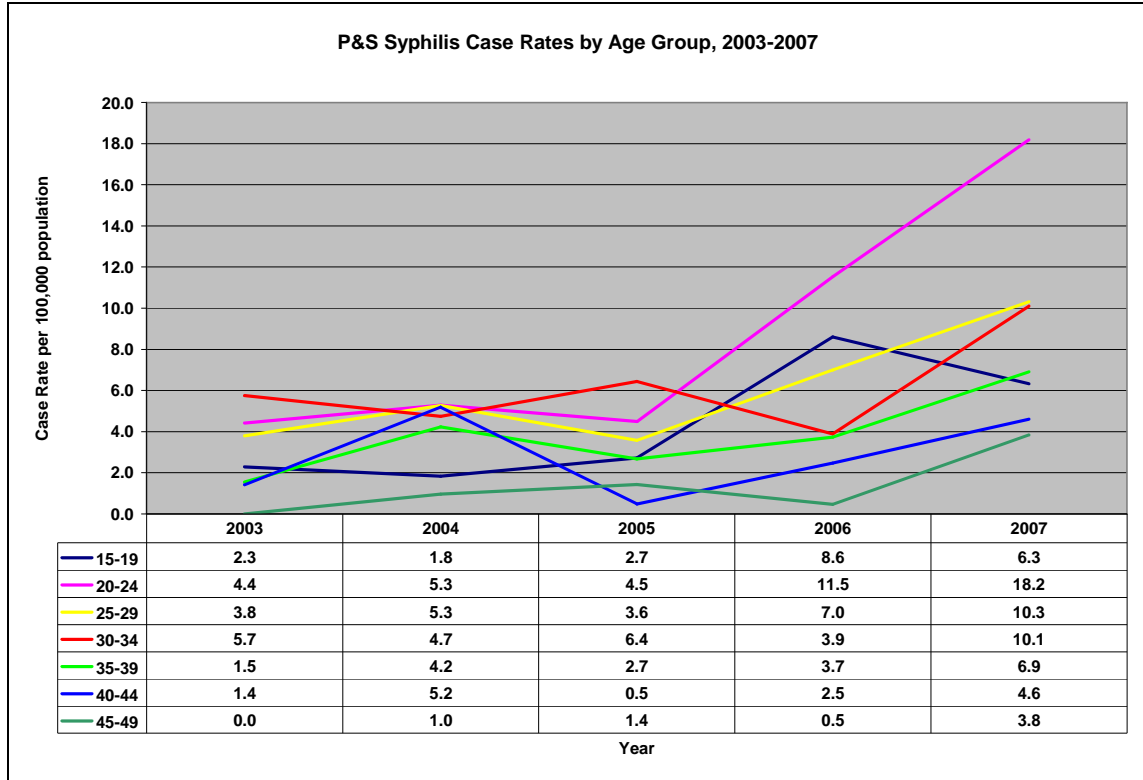
Figure 25



There was a 180% increase in individuals aged 15-19, a 290% increase among 20-24 year olds, 200% increase among 25-29 year olds, 63.6% increase among 30-34 year olds, 333% increase among 35-39 year olds, and a 200% increase among 40-44 year olds. Individuals aged 45-49 reported no cases of P&S syphilis in 2003, but reported 8 cases in 2007. Between 2006 and 2007, there was a decrease in the case rate for individuals aged 15-19 (Figure 25).

During 2007, 77.3% of P&S infection was in 15-49 year olds. When comparing these age groups, the case rate of P&S infection for 20-24 year olds was five times the rate of infection among 45-49 year olds, four times the rate of 40-44 year olds, nearly three times the infection rate of 15-19 and 35-39 year olds, and nearly twice the case rate of 25-34 year olds.

Figure 26



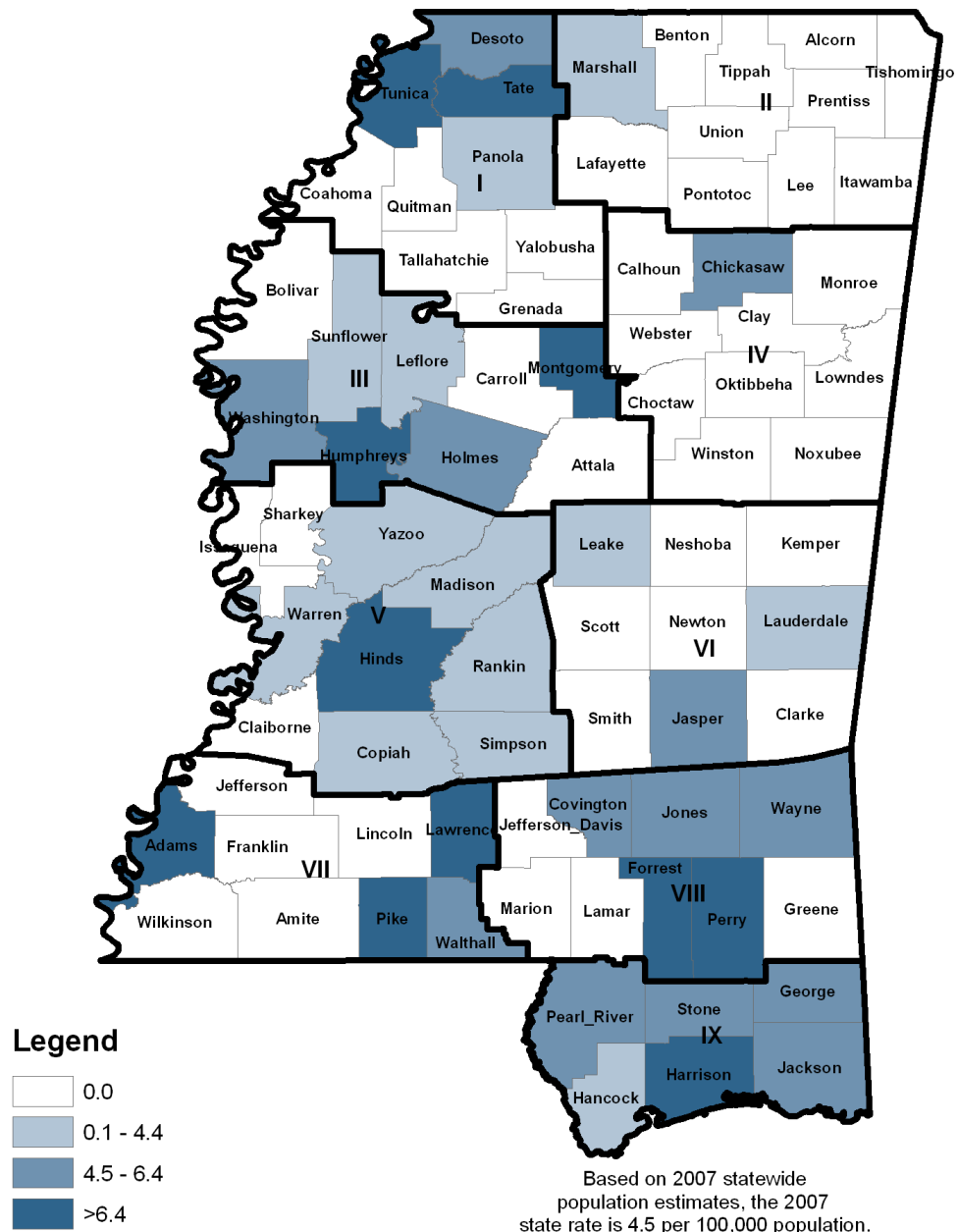
In 2007, cases were reported in 37 of the 82 counties. Twenty-four counties reported higher case rates of early syphilis than the statewide case rate of 4.5 cases per 100,000 population (Figure 26). Montgomery County had the highest rate of Primary and Secondary syphilis infection (59.6 per 100,000), followed by Lawrence County (29.7 per 100,000), Tunica County (19.2), Tate County (11.2), and Hinds County (10.8 per 100,000).

P & S Syphilis Co-infection

Forty five (45.9%) P&S cases were MSM in 2007. Among MSM, 16 (35.6%) were co-infected with HIV and P&S syphilis, 15 (33.3%) MSM were HIV negative, and 14 (31.1%) of MSM had unknown status.

Figure 27

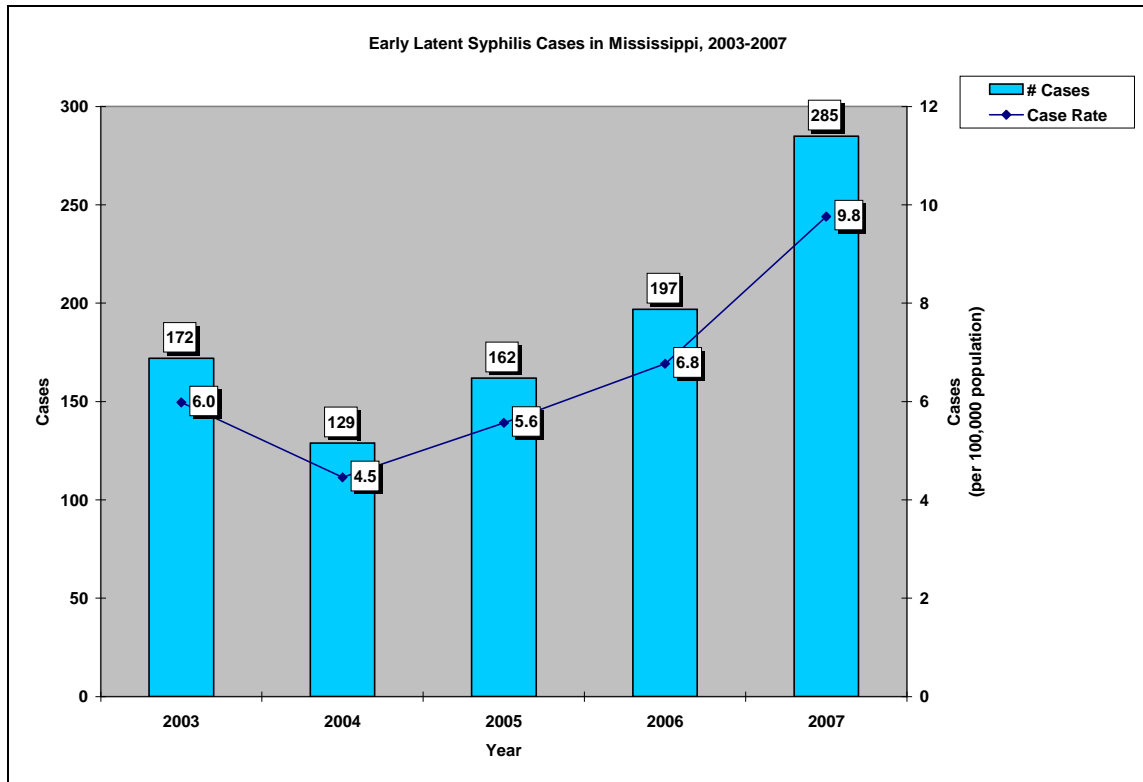
**Primary and Secondary syphilis case rates
per 100,000 population, by county of residence,
Mississippi, 2007**



Syphilis- Early Latent (ELS)

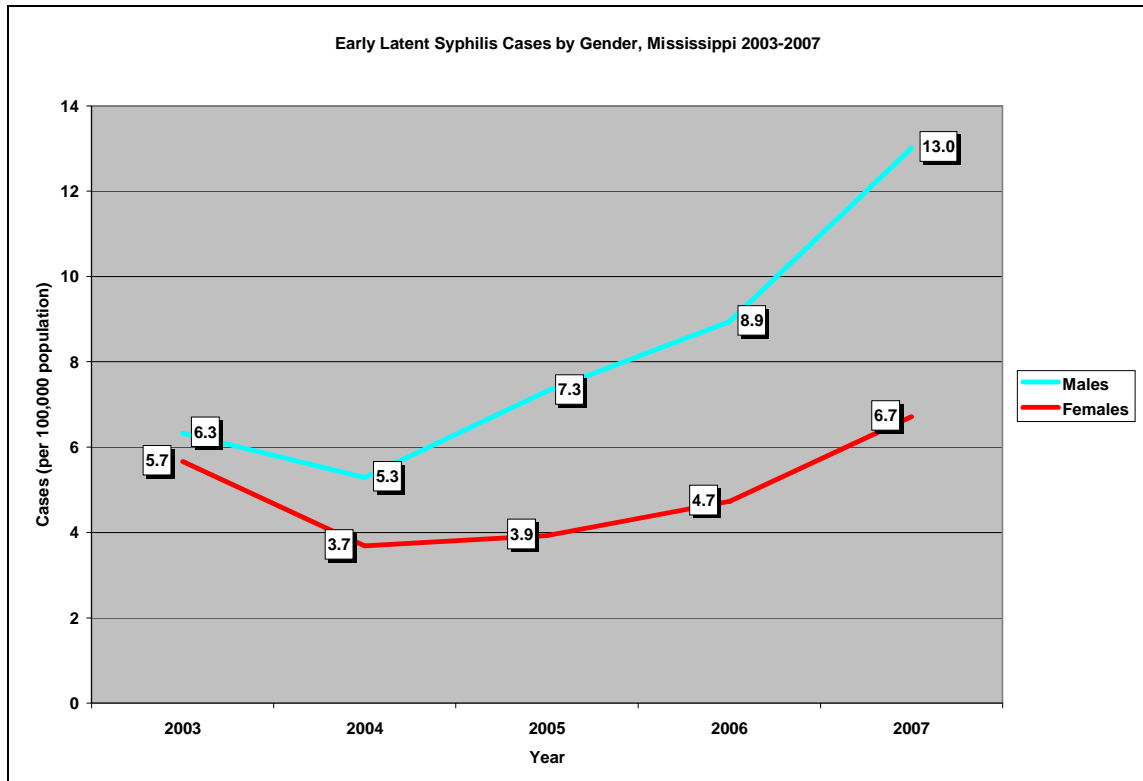
In Mississippi, Early Latent syphilis (ELS) cases have demonstrated an increasing trend over the past five years, with a 44.6% increase during 2006-2007. There were 172 (6.0 per 100,000 population) Early Latent syphilis cases reported during 2003 and the number increased 65.7% to 285 cases (9.8 per 100,000 population) during 2007. Figure 28 shows the 5 year trend in cases and case rates reported.

Figure 28



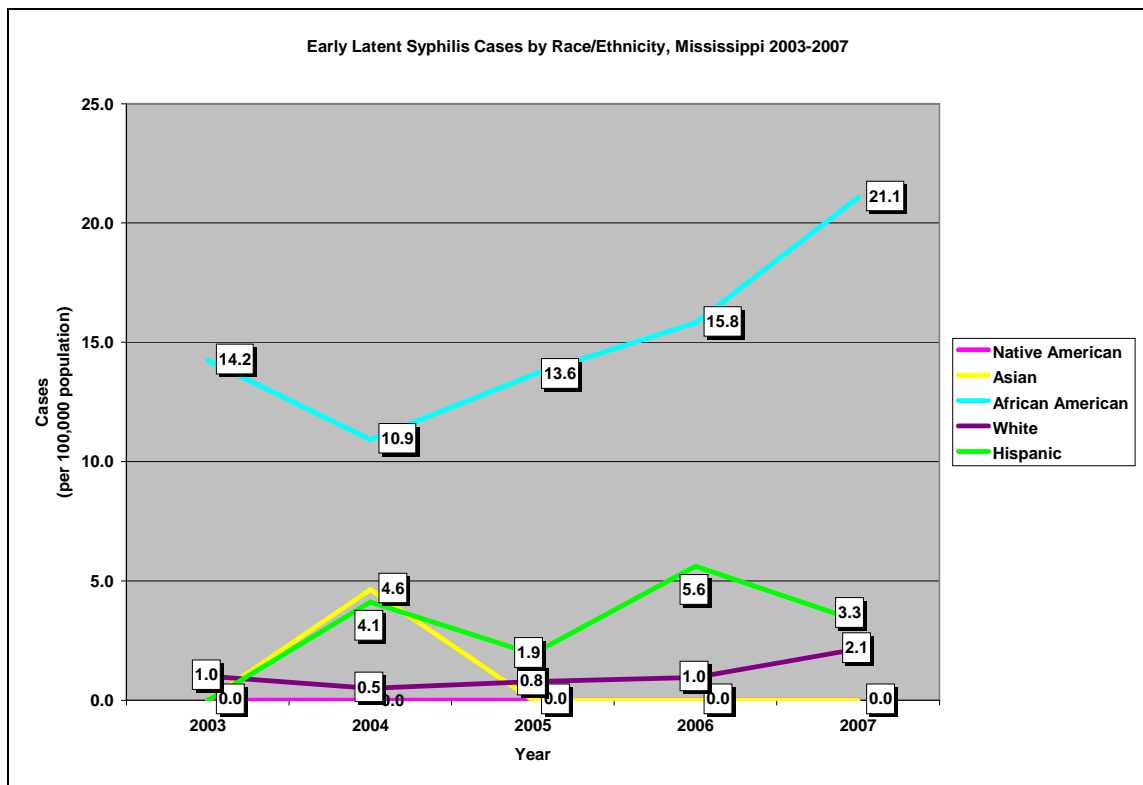
From 2003-2007, the male case rate of ELS increased from 6.3 to 13.0 per 100,000 population (Figure 29). Female case rate increased from 5.7 to 6.7 per 100,000 population. Figure 29 shows a wide case rate margin between genders in 2007, although there was a very little difference in 2003. In 2007, the rate of male infection was nearly twice the rate of female infection. Due to the increase in MSM cases of syphilis, the rate of male infections continues to increase.

Figure 29



From 2003-2007, there was an increase in case rates for African Americans and whites (Figure 30). African Americans had the most notable increase in case rates from 2003-2007; the number of cases increased 52.6% (from 150 to 229 cases) and the case rate has increased from 14.2 to 21.1 per 100,000 population. Whites had the second highest increase in case rates; the number of cases increased 111.1% during the past five years (from 18 to 38 cases) and the case rate has increased from 1.0 to 2.1 per 100,000 population. When comparing all racial/ethnic groups, African Americans had a case rate nearly ten times the rate of infection among whites, and six times the rate of Hispanics.

Figure 30



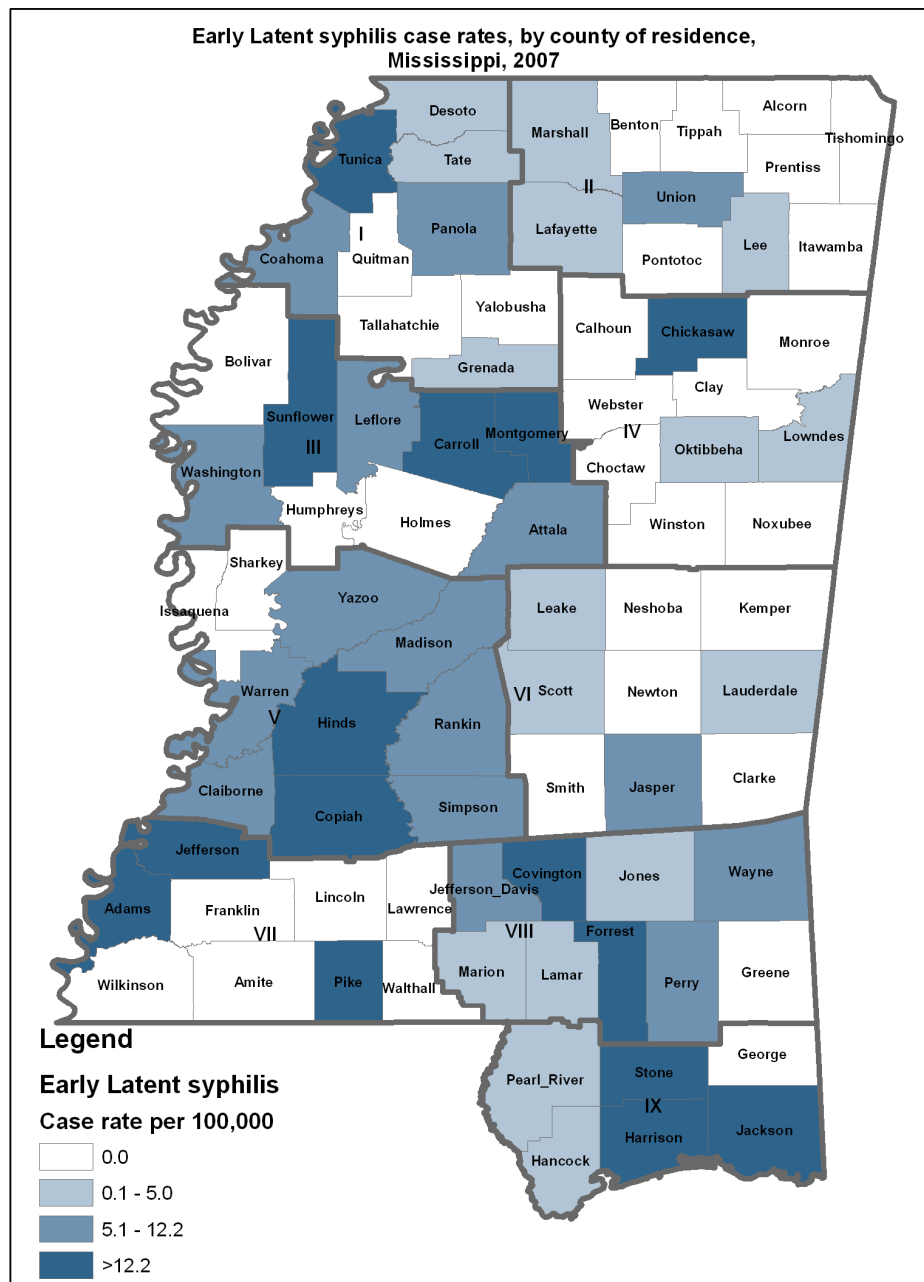
From 2003-2007, there was a significant increase in case rates among individuals 15 and older (Table 16). The table below shows that individuals aged 55-59 years old had the highest increase in case rates, followed by individuals aged 25-29 years.

Table 16. Early Latent Syphilis Case Rates by Age Group, 2003-2007

Year	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59
2003	5.5	15.9	7.0	10.5	13.9	14.1	4.8	6.6	2.6
2004	3.2	11.0	5.3	9.5	11.6	8.0	3.8	8.6	1.3
2005	2.7	8.5	12.3	13.4	15.5	8.6	8.0	5.8	5.3
2006	6.8	14.8	17.5	17.8	11.7	11.8	9.4	5.6	1.7
2007	10.8	20.1	21.1	18.5	17.5	16.9	14.4	10.1	11.6

There were thirty five counties that reported no cases of Early Latent syphilis in 2007. Analysis of county-level Early latent syphilis case rates per 100,000 population for 2007 reveal that Montgomery County ranked the highest with a rate of 76.6, followed by Hinds County (35.7), Covington County (29.3), Copiah County (27.4), Jefferson County (21.8).

Figure 31



HIV/AIDS Testing Data

Currently, Mississippi has several organizations receiving public funds that provide HIV testing, counseling, and referral services. These sites include MSDH clinic sites, including STD, family planning, prenatal and tuberculosis clinics, ASOs (AIDS Service Organizations), community health centers, and mobile test sites. In addition, MSDH collaborates with the University of Mississippi Medical Center (UMMC) and Mall Services, LLC to provide STD/HIV related services.

MSDH offers confidential HIV testing. Overall in 2007, 83,144 tests were performed in the Public Health Laboratory. Sixty-six percent (66%) of the tests were provided for females, 67% for African Americans, and 27% for whites and 6% for others. Most of the tests were performed for persons aged 25-44 years (44%) followed by persons aged 20-24 (29%) (Table 17).

Among men who reported a risk, 94% reported sex with a female as their risk factor and 6% reported sex with a male (Table 18). Ninety-eight percent (98%) of women reported sex with a male as their risk factor.

**Table 17. HIV Counseling and Testing Data, by Demographics:
Mississippi, 2007**

Sex	Number	Percentage
Male	27,727	33
Female	54,638	66
Unknown	779	1
Race/ethnicity		
White	22,379	27
African American	55,950	67
Hispanic	92	<1
Other	4,058	5
Unknown	665	1
Age (years)		
<10	195	<1
10-14	15,226	18
15-24	24,324	29
25-44	36,258	44
45-64	6,520	8
>65	621	1
Total	83,144	100

**Table 18. HIV Counseling and Testing Data, by Risk Factor:
Mississippi, 2007**

Sex	Injected nonprescription drugs	Health care worker	Infant/child with HIV+ mother	Sex with female	Sex with male	Sex for money or drugs	Non- injectable drugs	Total
Male	8	28	18	11,258	665	2	16	11,995
Female	4	78	12	316	30,018	15	8	30,451
Unknown	0	0	0	282	53	0	0	335
Total	12	106	30	11,856	30,736	17	24	42,781

Section

2

RYAN WHITE HIV/AIDS CARE ACT SPECIAL QUESTIONS AND CONSIDERATIONS

Question 1: What are the patterns of utilization of HIV services of persons in Mississippi?

Question 1

What are the patterns of utilization of HIV services of persons in Mississippi?

The Ryan White Comprehensive AIDS Resources Emergency (CARE) Act provides federal funds to help communities and states increase the availability of primary health care and support services for people living with HIV disease. CARE Act funds are allocated to (for Part A Eligible Metropolitan Areas disproportionately affected by HIV/AIDS), (for States and Part B Territories) which includes funding earmarked for AIDS Drug Assistance Programs (ADAP), Part C (for outpatient early intervention services and ambulatory care) and (to Part D coordinate and enhance services for children, youth, women, and their families). The CARE Act Program also includes Special Projects of National Significance (SPNS), the HIV/AIDS Education Training Centers and the Dental Reimbursement Program.

Highlights

- Ryan White CARE ACT Part B clientele reflect the population in Mississippi affected by the HIV disease. Sex, race/ethnicity, and age of the CARE ACT clientele are similar to those of persons reported to MSDH HIV/AIDS Surveillance System.
- Through the Mississippi AIDS Drug Assistance Program (ADAP), 1,274 persons received antiretroviral therapy in 2007. Of these, 332 were newly enrolled individuals. Most of these persons were male, African American, and 25-44 years of age.
- Through the Mississippi Housing Opportunities for People with AIDS Program (HOPWA), 567 Mississippians were served in 2007. Majority were African American and male.

In 2007, a total of 1,330 clients received services funded through the Ryan White Part B award. Of these, 332 persons were new clients. During 2007, the distribution of Part B CARE Act clients by race/ethnicity, and sex was similar to the distribution of persons living with HIV disease in Mississippi at the end of 2007. There was a slight difference in the distribution of both groups by age category (Table 19).

Table 19. Comparison of Demographic Characteristics of CARE Act Part B clients and Individuals Living with HIV Disease: Mississippi, 2007

	CARE Act clients, % (N=1,330)	Persons living with HIV disease, % (N=8,806)
Race/ethnicity		
White	23	25
African American	76	72
Hispanic	<1	2
Asian	<1	<1
American Indian/Alaska Native	<1	<1
More than one race	<1	<1
Sex		
Male	66	68
Female	34	32
Transgender	<1	0
Age (yrs.)		
Under 2	<1	1
2-12	<1	<1
13-24	5	18
25-44	61	64
45-64	33	16
65 years or older	1	1

AIDS Drug Assistance Program (ADAP)

AIDS Drug Assistance Programs (ADAP) are authorized under Part B of the CARE Act. ADAPs are state-administered programs that provide HIV/AIDS medications to low-income individuals living with HIV disease who have little or no coverage from private or third party insurance. In addition to providing medications for HIV treatment, Part B funds for ADAP are used for the prevention and treatment of opportunistic infections.

Through the Mississippi AIDS Drug Assistance Program (ADAP), 1,274 persons received medications in 2007. Twenty-six percent (333) were newly enrolled clients. Table 20 gives a demographic breakdown of ADAP clients in Mississippi. Most Mississippi ADAP clients served in 2007 were African American (76%), male (67%), and between the ages of 25-44 years of age (60%).

**Table 20. Demographic Characteristics of ADAP clients:
Mississippi, 2007**

Demographic Category	Number of clients
Race/ethnicity	
White	297
African American	964
Hispanic	1
Asian	3
American Indian/Alaska Native	3
More than one race	6
Sex	
Male	859
Female	413
Transgender	2
Age (yrs.)	
Under 2	2
2-12	2
13-24	51
25-44	765
45-64	438
65 years or older	16

Housing Opportunities for People with AIDS (HOPWA)

The HOPWA program was established by HUD to address the specific needs of persons living with HIV/AIDS and their families. HOPWA makes grants to local communities, states, and nonprofit organizations for projects that benefit low income persons medically diagnosed with HIV/AIDS and their families.

Through the Mississippi HOPWA program, 567 individuals received housing assistance in 2007. Table 21 gives a demographic breakdown of HOPWA clients in Mississippi. Most Mississippi HOPWA clients served in 2007 were African American (80%) and male (60%).

**Table 21. Demographic Characteristics of HOPWA clients:
Mississippi, 2007**

Demographic Category	Number of clients
Race/ethnicity	
White	112
African American	452
Hispanic	2
Asian	1
American Indian/Alaska Native	0
More than one race	0
Sex	
Male	341
Female	226
Transgender	0

Appendix A: Detailed Description of Data Sources Used

1. Core HIV/AIDS Surveillance:

AIDS Surveillance

Overview: AIDS is a reportable condition in all states and territories. AIDS cases have been reportable since the early 1980's and cases have been defined according to the prevailing CDC surveillance case definition (last revised in 1993). The AIDS Surveillance system was established to monitor incidence and the demographic profile of AIDS; describe the modes of HIV transmission among persons diagnosed with AIDS; guide the development and implementation of public health intervention and prevention programs; and assist in the assessment of the efficacy of public health interventions. AIDS surveillance data are also used to allocate for Titles I and II of the Ryan White Care Act.

States and local health departments actively solicit disease reports from health care providers and laboratories. Standardized case report forms are used; these forms collect socio-demographic information, mode of exposure, laboratory and clinical information, vital status, and referrals for treatment of services.

Population: All persons who meet the 1993 CDC AIDS surveillance case definition.

Strengths: Only source of AIDS information that is available in all areas (states), these data reflect the impact of AIDS on a community. AIDS Surveillance has been determined to be >85% complete. The data include all demographic groups (age, race/ethnicity, gender)

Limitations: Due to the prolonged and variable period from infection to the development of AIDS, trends in AIDS surveillance do not represent recent HIV infections. Asymptomatic HIV infected persons are also not represented by AIDS case data. In addition, incomplete HIV or CD4+ T-cell testing may interfere with the representativeness of reporting. Further, the widespread use of HAART complicates the interpretation of AIDS case surveillance data and estimation of the HIV/AIDS epidemic in an area. Newly reported AIDS cases may reflect treatment failures or the failure of the health care system to halt progression of HIV infection to AIDS. AIDS cases represent late stage HIV infections.

HIV Surveillance

Overview: Reporting of human immunodeficiency virus (HIV) infections to local health authorities for follow-up is an integral part of AIDS surveillance activities and it has been recommended by CDC and other professional organizations since the virus was identified and a test for HIV was licensed. Mississippi initiated confidential HIV reporting in 1988. As part of ongoing active HIV surveillance, state and local health departments educate providers on their reporting responsibilities, establish active surveillance sites, liaise with laboratories conducting HIV testing including any test that may be indicative of HIV infection (i.e. EIA and Western Blot testing, IFA, PCR, CD+4, Nucleic Acid Tests) and investigate HIV cases of epidemiological importance. Currently, all states are federally mandated to conduct name based HIV reporting.

Population: All persons who test positive for the Human Immunodeficiency Virus (HIV).

Strengths: HIV surveillance data represents more recent infection, compared with AIDS surveillance data. Based upon state evaluations, HIV infection reporting is estimated to be >85% complete for persons who have tested positive for HIV. HIV surveillance provides a minimum estimate of the number of persons known to be HIV-infected reported to the health department and may identify emerging patterns of transmission, and can be used to detect trends in HIV infections among populations of particular interest (e.g., children, adolescents, women) that may not be evident from AIDS surveillance. HIV surveillance provides a basis for establishing and evaluating linkages to the provision of prevention and early intervention services, and can be used to anticipate unmet needs for HIV care.

Limitations: HIV surveillance data may underestimate the level of recently infected persons because some infected persons either do not know they are infected or have not sought testing. Persons who have tested positive in an anonymous test site and have not sought medical care, where they would be confidentially tested, are not eligible to be reported to the surveillance system. HIV surveillance data represent infections in jurisdictions where reporting laws for HIV are in place. HIV reporting laws vary by jurisdiction; therefore, consultation with local surveillance staff is advised on how to interpret local HIV surveillance data. Furthermore, reporting of behavioral risk information may not be complete.

2. Care Act Data Report (CADR):

Overview: The CADR is an annual data report form used to collect information from grantees and service providers funded under Parts A, B, C, D, and E of the Ryan White CARE Act. The CADR collects general information on provider and program characteristics including the types of organizations providing services (such as ownership status), sources of revenue, expenditures, paid and volunteer staff. Additionally, the CADR collects aggregate unduplicated demographic information (gender, race, age, HIV Exposure Category, etc.) on total counts of clients served by each provider as well as health insurance coverage and utilization data about medical and support services.

Strengths: It is the only source of Ryan White CARE Act Data that is available in all States and EMAs and provides Demographic Information and Service Utilization Data for all Ryan White CARE Act clients.

Limitations: Unless a Part A or Part B Grantee has access to unduplicated data across an entire EMA or State, data are duplicated across the EMA or the state. Again, since the CADR is a summary report by provider, it will not be able to generate demographic cross-tabulations.

3. Behavioral Risk Factor Surveillance System (BRFSS):

Overview: The BRFSS is a state-based random digit-dialed telephone survey that monitors state-level prevalence of the major behavioral risks among adults associated with premature morbidity and mortality. Each month, a sample of households is contacted and one person in the household who is 18 years or older is randomly selected for an interview. Multiple attempts are made to contact the sampled household. A Spanish translation of the interview is available. Respondents to the BRFSS questionnaire are asked a variety of questions about their personal health behaviors and health experiences. Since 1994, the BRFSS questionnaire has asked questions related to HIV/AIDS of respondents aged 18-49 years. These questions include: perceived risk of getting an HIV infection; use of HIV testing; reasons for testing; if tested, the type of place where tested, receipt of post-HIV test counseling; attitudes towards condoms; and attitudes about when to initiate HIV/AIDS education in school. As of 2001, respondents have been asked about their perception of the importance of HIV testing.

Population: All non-institutionalized adults, 18 years and older that reside in a household with a telephone.

Strengths: Data from the BRFSS survey are population-based; thus, estimates about testing attitudes and practices can be generalized to the adult population of a state. Information collected from the BRFSS survey may be useful for planning community-wide education programs.

Limitations: BRFSS data are self-reported, thus the information may be subject to recall bias. BRFSS respondents are contacted by telephone survey, thus the data is not representative of households without a telephone. In addition, BRFSS data are representative of the general non-institutionalized adult population in an area, not just persons at highest risk for HIV/AIDS. The extent of HIV behavioral risk information collected by the BRFSS questionnaire is limited and inferences can only be made at the state level.

4. Youth Risk Behavior Surveillance System (YRBSS):

Overview: The YRBSS was developed in 1990 to monitor priority health risk behaviors that contribute to the leading causes of death, disability, and social problems among youth and adults in the United States. The YRBSS was designed to determine the prevalence of health risk behaviors, examine the co-occurrence of health risk behaviors, and assess health risk behavior trends.

Population: The YRBSS includes national, state, and local school based surveys of representative samples of 9th through 12th grade students.

Strengths: The YRBSS includes national surveys that provide data representative of high school students in public and private schools in the United States. The state and local surveys provide data representative of public high schools in each state or local school district. Inferences from YRBSS estimates can be drawn about behaviors and attitudes of adolescents in school, which makes the information useful for developing community-wide prevention programs aimed at younger persons. YRBSS uses a standardized questionnaire so that comparisons can be made

across participating jurisdictions. Jurisdictions have the option of asking questions to meet local needs.

Limitations: YRBSS data are self-reported, therefore, reporting of sensitive behavioral information may not be accurate (may be underreported or over reported). Also, because the YRBSS questionnaire is administered in school, the data are representative only of students and cannot be generalized to all youth. For example, students at highest risk, who may be more likely to be absent from school or to drop out of school, may be underrepresented in this survey, especially among upper grades. The questionnaire does not include questions about homosexual or bisexual behavior.

5. STD Surveillance

Overview: The Mississippi State Department of Health Office of STD/HIV conducts statewide surveillance to determine the number of reportable cases of STDs and to monitor trends. Other services include partner counseling and referral services for examination and treatment. In Mississippi, chlamydia, gonorrhea, syphilis, and chancroid are reportable sexually transmitted diseases. Chlamydia is the most frequently reported of all reportable diseases, followed by gonorrhea. Mississippi collects risk information for syphilis and HIV disease cases only, however; demographic information (age, race, sex) and STD disease history is collected for all reportable STDs. STD surveillance data can serve as a marker for changes in HIV disease trends.

Population: Any individual with testing history of sexually transmitted diseases in the state of Mississippi.

Strengths: The Mississippi State Department of Health maintains a database which captures all reportable STD disease information with names and demographics. This information is useful in performing analysis of trends among gender and racial/ethnic groups. This information is valuable in targeting at risk groups for STD prevention education.

Limitations: Unknown race for chlamydia and gonorrhea have been reported at 20% of all races reported. This provides an incomplete picture of individuals reported with chlamydia and gonorrhea. Also, because of the high number of chlamydia and gonorrhea cases reported, the Mississippi State Department of Health is unable to provide follow-up to assure treatment on all cases. Only priority cases of chlamydia and gonorrhea are followed to assure treatment including all pregnant females and individuals 18 and younger who have no treatment indicated on their report.

6. TB Registry

Overview: The Mississippi State Department of Health, Office of Communicable Disease's Tuberculosis Office conducts statewide surveillance of cases of tuberculosis. All TB cases diagnosed in Mississippi are reported using the CDC Report of Verified Case of Tuberculosis (RVCT) form. Surveillance information and laboratory reports are maintained in the Communicable Disease Case Information System (CDCIS). Surveillance data are analyzed to

monitor statewide trends, including HIV/TB co-infection. At least once each quarter, TB registry data is matched with HIV/AIDS surveillance data.

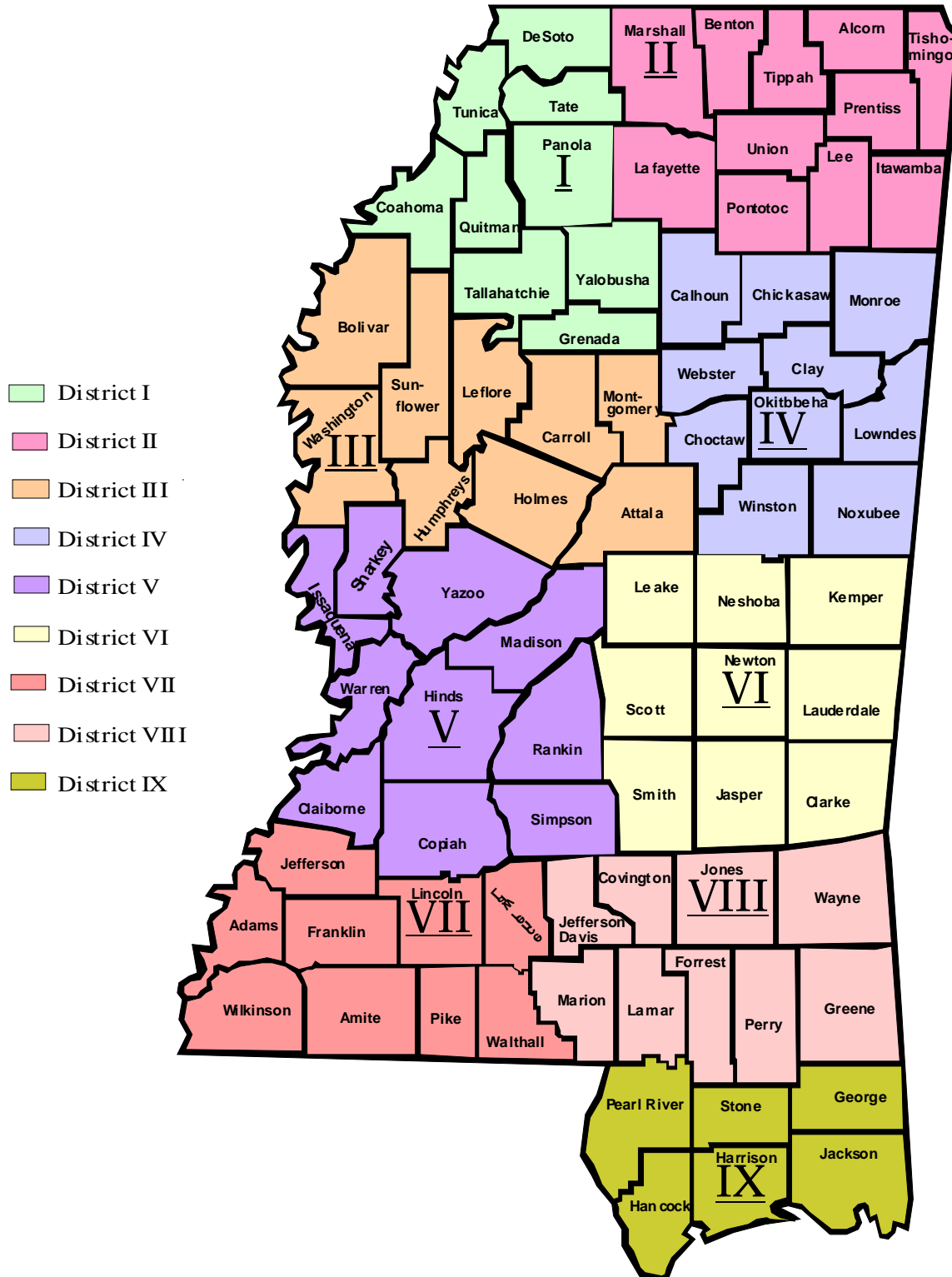
Population: Any individual with testing history of TB in the state of Mississippi.

Strengths: The Mississippi State Department of Health maintains a database which captures information with name and demographics on any individual with a testing history for tuberculosis in Mississippi.

Limitations: There may be limitations in matching TB and HIV disease databases, due to incomplete demographics, the misspelling or use of multiple names and/or aliases, or missing necessary data essential to match cases.

Appendix B:

Mississippi State Department of Health Public Health Districts



Appendix C: Glossary of Terms

AGE-ADJUSTED MORTALITY RATE: A mortality rate statistically modified to eliminate the effect of different age distributions in the different populations.

AGENT: A factor, such as a microorganism, chemical substance, or form of radiation, whose presence, excessive presence, or (in deficiency diseases) relative absence is essential for the occurrence of a disease.

AGE-SPECIFIC MORTALITY RATE: A mortality rate limited to a particular age group. The numerator is the number of deaths in that age group; the denominator is the number of persons in that age group in the population.

ATTRIBUTABLE PROPORTION: A measure of the public health impact of a causative factor; proportion of a disease in a group that is exposed to a particular factor which can be attributed to their exposure to that factor.

BIAS: Deviation of results or inferences from the truth, or processes leading to such systematic deviation. Any trend in the collection, analysis, interpretation, publication, or review of data that can lead to conclusions that are systematically different from the truth.

BIOLOGIC TRANSMISSION: The indirect vector-borne transmission of an infectious agent in which the agent undergoes biologic changes within the vector before being transmitted to a new host.

CARRIER: A person or animal without apparent disease who harbors a specific infectious agent and is capable of transmitting the agent to others. The carrier state may occur in an individual with an infection that is unapparent throughout its course (known as asymptomatic carrier), or during the incubation period, convalescence, and post convalescence of an individual with a clinically recognizable disease. The carrier state may be of short or long duration (transient carrier or chronic carrier).

CASE: In epidemiology, a countable instance in the population or study group of a particular disease, health disorder, or condition under investigation sometimes, an individual with the particular disease.

CASE-CONTROL STUDY: A type of observational analytic study. Enrollment into the study is based on presence ("case") or absence ("control") of disease. Characteristics such as previous exposure are then compared between cases and controls.

CASE DEFINITION: A set of standard criteria for deciding whether a person has a particular disease or health-related condition, by specifying clinical criteria and limitations on time, place, and person.

CASE-FATALITY RATE: The proportion of persons with a particular condition (cases) who die from that condition. The denominator is the number of incident cases; the numerator is the number of cause-specific deaths among those cases.

CAUSE-SPECIFIC MORTALITY RATE: The mortality rate from a specified cause for a population. The numerator is the number of deaths attributed to a specific cause during a specified time interval; the denominator is the size of the population at the midpoint of the time interval.

CENSUS: The enumeration of an entire population, usually with details being recorded on residence, age, sex, occupation, ethnic group, marital status, birth history, and relationship to head of household.

CLUSTER: An aggregation of cases of a disease or other health-related condition, particularly cancer and birth defects, which are closely grouped in time and place. The number of cases may or may not exceed the expected number; frequently the expected number is not known.

COHORT: A well-defined group of people who have had a common experience or exposure, who are then followed up for the incidence of new diseases or events, as in a cohort or prospective study. A group of people born during a particular period or year is called a birth cohort.

COHORT STUDY: A type of observational analytic study. Enrollment into the study is based on exposure characteristics or membership in a group. Disease, death, or other health-related outcomes are then ascertained and compared.

COMMON SOURCE OUTBREAK: An outbreak that results from a group of persons being exposed to a common noxious influence, such as an infectious agent or toxin. If the group is exposed over a relatively brief period of time, so that all cases occur within one incubation period, then the common source outbreak is further classified as a point source outbreak. In some common source outbreaks, persons may be exposed over a period of days, weeks, or longer, with the exposure being either intermittent or continuous.

CONTACT: Exposure to a source of an infection, or a person so exposed.

CONTAGIOUS: Capable of being transmitted from one person to another by contact or close proximity.

CRUDE MORTALITY RATE: The mortality rate from all causes of death for a population.

DEATH-TO-CASE RATIO: The number of deaths attributed to a particular disease during a specified time period divided by the number of new cases of that disease identified during the same time period.

DEMOGRAPHIC INFORMATION: The “person” characteristics--age, sex, race, and occupation--of descriptive epidemiology used to characterize the populations at risk.

DENOMINATOR: The lower portion of a fraction used to calculate a rate or ratio. In a rate, the denominator is usually the population (or population experience, as in person-years, etc.) at risk.

DETERMINANT: Any factor, whether event, characteristic, or other definable entity, that brings about change in a health condition, or in other defined characteristics.

DIRECT TRANSMISSION: The immediate transfer of an agent from a reservoir to a susceptible host by direct contact or droplet spread.

DISTRIBUTION: In epidemiology, the frequency and pattern of health-related characteristics and events in a population. In statistics, the observed or theoretical frequency of values of a variable.

ENDEMIC DISEASE: The constant presence of a disease or infectious agent within a given geographic area or population group; may also refer to the usual prevalence of a given disease within such area or group.

ENVIRONMENTAL FACTOR: An extrinsic factor (geology, climate, insects, sanitation, health services, etc.), which affects the agent and the opportunity for exposure.

EPIDEMIC: The occurrence of more cases of disease than expected in a given area or among a specific group of people over a particular period of time.

EPIDEMIC PERIOD: A time period when the number of cases of disease reported is greater than expected.

EPIDEMIOLOGY: The study of the distribution and determinants of health-related states or events in specified populations, and the application of this study to the control of health problems.

EVALUATION: A process that attempts to determine as systematically and objectively as possible the relevance, effectiveness, and impact of activities in the light of their objectives.

EXPOSED (GROUP): A group whose members have been exposed to a supposed cause of disease or health state of interest, or possess a characteristic that is a determinant of the health outcome of interest.

HEALTH: A state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.

HEALTH INDICATOR: A measure that reflects, or indicates, the state of health of persons in a defined population, e.g., the infant mortality rate.

HEALTH INFORMATION SYSTEM: A combination of health statistics from various sources, used to derive information about health status, health care, provision and use of services, and impact on health.

HIGH-RISK GROUP: A group in the community with an elevated risk of disease.

HOST: A person or other living organism that can be infected by an infectious agent under natural conditions.

HOST FACTOR: An intrinsic factor (age, race, sex, behaviors, etc.) which influences an individual's exposure, susceptibility, or response to a causative agent.

IMMUNITY, ACTIVE: Resistance developed in response to stimulus by an antigen (infecting agent or vaccine) and usually characterized by the presence of antibody produced by the host.

IMMUNITY, HERD: The resistance of a group to invasion and spread of an infectious agent, based on the resistance to infection of a high proportion of individual members of the group. The resistance is a product of the number susceptible and the probability that those who are susceptible will come into contact with an infected person.

IMMUNITY, PASSIVE: Immunity conferred by an antibody produced in another host and acquired naturally by an infant from its mother or artificially by administration of an antibody-containing preparation (antiserum or immune globulin).

INCIDENCE RATE: A measure of the frequency with which an event, such as a new case of illness, occurs in a population over a period of time. The denominator is the population at risk; the numerator is the number of new cases occurring during a given time period.

INCUBATION PERIOD: A period of sub clinical or unapparent pathologic changes following exposure, ending with the onset of symptoms of infectious disease.

INDIRECT TRANSMISSION: The transmission of an agent carried from a reservoir to a susceptible host by suspended air particles or by animate (vector) or inanimate (vehicle) intermediaries.

INFECTIVITY: The proportion of persons exposed to a causative agent who become infected by an infectious disease.

LATENCY PERIOD: A period of sub clinical or unapparent pathologic changes following exposure, ending with the onset of symptoms of chronic disease.

MEASURE OF ASSOCIATION: A quantified relationship between exposure and disease; includes relative risk, rate ratio, odds ratio.

MEDICAL SURVEILLANCE: The monitoring of potentially exposed individuals to detect early symptoms of disease.

MORBIDITY: Any departure, subjective or objective, from a state of physiological or psychological well-being.

MORTALITY RATE: A measure of the frequency of occurrence of death in a defined population during a specified interval of time.

MORTALITY RATE, INFANT: A ratio expressing the number of deaths among children under one year of age reported during a given time period divided by the number of births reported during the same time period. The infant mortality rate is usually expressed per 1,000 live births.

MORTALITY RATE, NEONATAL: A ratio expressing the number of deaths among children from birth up to but not including 28 days of age divided by the number of live births reported during the same time period. The neonatal mortality rate is usually expressed per 1,000 live births.

MORTALITY RATE, POSTNEONATAL: A ratio expressing the number of deaths among children from 28 days up to but not including 1 year of age during a given time period divided by the number of live births reported during the same time period. The post neonatal mortality rate is usually expressed per 1,000 live births.

NATURAL HISTORY OF DISEASE: The temporal course of disease from onset (inception) to resolution.

NECESSARY CAUSE: A causal factor whose presence is required for the occurrence of the effect (of disease).

NUMERATOR: The upper portion of a fraction.

OBSERVATIONAL STUDY: Epidemiological study in situations where nature is allowed to take its course. Changes or differences in one characteristic are studied in relation to changes or differences in others, without the intervention of the investigator.

ODDS RATIO: A measure of association which quantifies the relationship between an exposure and health outcome from a comparative study; also known as the cross-product ratio.

OUTBREAK: Synonymous with epidemic. Sometimes the preferred word, as it may escape sensationalism associated with the word epidemic. Alternatively, a localized as opposed to generalized epidemic.

PANDEMIC: An epidemic occurring over a very wide area (several countries or continents) and usually affecting a large proportion of the population.

PERIOD PREVALENCE: The amount a particular disease present in a population over a period of time.

PERSON-TIME RATE: A measure of the incidence rate of an event, e.g., a disease or death, in a population at risk over an observed period to time, that directly incorporates time into the denominator.

POINT PREVALENCE: The amount of a particular disease present in a population at a single point in time.

POPULATION: The total number of inhabitants of a given area or country. In sampling, the population may refer to the units, from which the sample is drawn, not necessarily the total population of people.

POSITIVE PREDICTIVE VALUE: A measure of the predictive value of a reported case or epidemic; the proportion of cases reported by a surveillance system or classified by a case definition which are true cases.

PREVALENCE: The number or proportion of cases or events or conditions in a given population.

PREVALENCE RATE: The proportion of persons in a population who have a particular disease or attribute at a specified point in time or over a specified period of time.

PROPAGATED OUTBREAK: An outbreak that does not have a common source, but instead spreads from person to person.

PROPORTION: A type of ratio in which the numerator is included in the denominator. The ratio of a part to the whole, expressed as a "decimal fraction" (e.g., 0.2), as a fraction (1/5), or, loosely, as a percentage (20%).

PROPORTIONATE MORTALITY: The proportion of deaths in a specified population over a period of time attributable to different causes. Each cause is expressed as a percentage of all deaths, and the sum of the causes must add to 100%. These proportions are not mortality rates, since the denominator is all deaths, not the population in which the deaths occurred.

PUBLIC HEALTH SURVEILLANCE: The systematic collection, analysis, interpretation, and dissemination of health data on an ongoing basis, to gain knowledge of the pattern of disease occurrence and potential in a community, in order to control and prevent disease in the community.

RACE-SPECIFIC MORTALITY RATE: A mortality rate limited to a specified racial group. Both numerator and denominator are limited to the specified group.

RANDOM SAMPLE: A sample derived by selecting individuals such that each individual has the same probability of selection.

RATE: An expression of the frequency with which an event occurs in a defined population.

RATE RATIO: A comparison of two groups in terms of incidence rates, person-time rates, or mortality rates.

RATIO: The value obtained by dividing one quantity by another.

RELATIVE RISK: A comparison of the risk of some health-related event such as disease or death in two groups.

REPRESENTATIVE SAMPLE: A sample whose characteristics correspond to those of the original population or reference population.

RESERVOIR: The habitat in which an infectious agent normally lives, grows and multiplies; reservoirs include human reservoirs, animals reservoirs, and environmental reservoirs.

RISK: The probability that an event will occur, e.g. that an individual will become ill or die within a stated period of time or age.

RISK FACTOR: An aspect of personal behavior or lifestyle, an environmental exposure, or an inborn or inherited characteristic that is associated with an increased occurrence of disease or other health-related event or condition.

RISK RATIO: A comparison of the risk of some health-related event such as disease or death in two groups.

SAMPLE: A selected subset of a population. A sample may be random or non-random and it may be representative or non-representative.

SEASONALITY: Change in physiological status or in disease occurrence that conforms to a regular seasonal pattern.

SECONDARY ATTACK RATE: A measure of the frequency of new cases of a disease among the contacts of known cases.

SECULAR TREND: Changes over a long period of time, generally years or decades.

SENSITIVITY: The ability of a system to detect epidemics and other changes in disease occurrence. The proportion of persons with disease who are correctly identified by a screening test or case definition as having disease.

SENTINEL SURVEILLANCE: A surveillance system in which a pre-arranged sample of reporting sources agrees to report all cases of one or more notifiable conditions.

SEX-SPECIFIC MORTALITY RATE: A mortality rate among either males or females.

SPECIFICITY: The proportion of persons without disease who are correctly identified by a screening test or case definition as not having disease.

SUFFICIENT CAUSE: A causal factor or collection of factors whose presence is always followed by the occurrence of the effect (of disease).

SURVEILLANCE: See PUBLIC HEALTH SURVEILLANCE

TRANSMISSION OF INFECTION: Any mode or mechanism by which an infectious agent is spread through the environment or to another person.

TREND: A long-term movement or change in frequency, usually upwards or downwards.

UNIVERSAL PRECAUTIONS: Recommendations issued by CDC to minimize the risk of transmission of blood borne pathogens, particularly HIV and HBV, by health care and public safety workers. Barrier precautions are to be used to prevent exposure to blood and certain body fluids of all patients.

VALIDITY: The degree to which a measurement actually measures or detects what it is supposed to measure.

VARIABLE: Any characteristic or attribute that can be measured.

VECTOR: An animate intermediary in the indirect transmission of an agent that carries the agent from a reservoir to a susceptible host.

VITAL STATISTICS: Systematically tabulated information about births, marriages, divorces, and deaths, based on registration of these vital events.

YEARS OF POTENTIAL LIFE LOST (YPLL): A measure of the impact of premature mortality on a population, calculated as the sum of the differences between some predetermined minimum or desired life span and the age of death for individuals who died earlier than that predetermined age.

Appendix D: Glossary of CARE Act Terms

ADAP (AIDS Drug Assistance Program): Administered by States and authorized under Part B of the CARE Act, provides FDA-approved medications to low-income individuals with HIV disease who have limited or no coverage from private insurance or Medicaid. ADAP funds may also be used to purchase insurance for uninsured CARE Act clients as long as the insurance costs do not exceed the cost of drugs through ADAP and the drugs available through the insurance program at least match those offered through ADAP.

AETC (AIDS Education and Training Center): Regional centers providing education and training for primary care professionals and other AIDS-related personnel. AETCs are authorized under Part F of the CARE Act and administered by the HRSA HIV/AIDS Bureau's Division of Training and Technical Assistance (DTTA).

AHRQ (Agency for Healthcare Research and Quality): Federal agency within HHS that supports research designed to improve the outcomes and quality of health care, reduce its costs, address patient safety and medical errors, and broaden access to effective services.

AIDS (Acquired Immunodeficiency Syndrome): A disease caused by the human immunodeficiency virus.

Antiretroviral: A substance that fights against a retrovirus, such as HIV. (See Retrovirus)

ASO (AIDS service organization): An organization that provides primary medical care and/or support services to populations infected with and affected by HIV disease.

Capacity: Core competencies that substantially contribute to an organization's ability to deliver effective HIV/AIDS primary medical care and health-related support services. Capacity development activities should increase access to the HIV/AIDS service system and reduce disparities in care among underserved PLWH in the EMA.

CARE Act (Ryan White Comprehensive AIDS Resources Emergency Act): Federal legislation created to address the unmet health care and service needs of people living with HIV Disease (PLWH) disease and their families. It was enacted in 1990 and reauthorized in 1996 and 2000.

CADR (CARE Act Data Report): A provider-based report generating aggregate client, provider, and service data for all CARE Act programs. Reports information on all clients who receive at least one service during the reporting period. Replaces the Annual Administrative Report (AAR) used for Part A and Part B data reports.

CBO (community-based organization): An organization that provides services to locally defined populations, which may or may not include populations infected with or affected by HIV disease.

CDC (Centers for Disease Control and Prevention): Federal agency within HHS that administers disease prevention programs including HIV/AIDS prevention.

CD4 or CD4+ Cells: Also known as "helper" T-cells, these cells are responsible for coordinating much of the immune response. HIV's preferred targets are cells that have a docking molecule called "cluster designation 4" (CD4) on their surfaces. Cells with this molecule are known as CD4-positive (CD4+) cells. Destruction of CD4+ lymphocytes is the major cause of the immunodeficiency observed in AIDS, and decreasing CD4 levels appear to be the best indicator for developing opportunistic infections.

CD4 Cell Count: The number of T-helper lymphocytes per cubic millimeter of blood. The CD4 count is a good predictor of immunity. As CD4 cell count declines, the risk of developing opportunistic infections increases. The normal adult range for CD4 cell counts is 500 to 1500 per cubic millimeter of blood. (The normal range for infants is considerably higher and slowly declines to adult values by age 6 years.) CD4 counts should be rechecked at least every 6 to 12 months if CD4 counts are greater than 500/mm³. If the count is lower, testing every 3 months is advised. (In children with HIV infection, CD4 values should be checked every 3 months.) A CD4 count of 200 or less is an AIDS-defining condition.

CMS (Centers for Medicare and Medicaid Services): Federal agency within HHS that administers the Medicaid, Medicare, State Child Health Insurance Program (SCHIP), and the Health Insurance Portability and Accountability Act (HIPAA).

Co-morbidity: A disease or condition, such as mental illness or substance abuse, co-existing with HIV disease.

Community Forum or Public Meeting: A small-group method of collecting information from community members in which a community meeting is used to provide a directed but highly interactive discussion. Similar to but less formal than a focus group, it usually includes a larger group; participants are often self-selected (i.e., not randomly selected to attend).

Comprehensive Planning: The process of determining the organization and delivery of HIV services. This strategy is used by planning bodies to improve decision-making about services and maintain a continuum of care for PLWH.

Community Health Centers: Federally-funded by HRSA's Bureau of Primary Health Care, centers provide family-oriented primary and preventive health care services for people living in rural and urban medically underserved communities.

Consortium/HIV Care Consortium: A regional or statewide planning entity established by many State grantees under Part B of the CARE Act to plan and sometimes administer Part B services. An association of health care and support service agencies serving PLWH under Part B of the CARE Act.

Continuous Quality Improvement: An ongoing process that involves organization members in monitoring and evaluating programs to continuously improve service delivery. CQI seeks to

prevent problems and to maximize the quality of care by identifying opportunities for improvement.

Continuum of Care: An approach that helps communities plan for and provide a full range of emergency and long-term service resources to address the various needs of PLWH.

CPCRA (Community Programs for Clinical Research on AIDS): Community-based clinical trials network that obtains evidence to guide clinicians and PLWH on the most appropriate use of available HIV therapies.

Cultural Competence: The knowledge, understanding, and skills to work effectively with individuals from differing cultural backgrounds.

Early Intervention Services (EIS): Activities designed to identify individuals who are HIV-positive and get them into care as quickly as possible. As funded through Titles I and II of the CARE Act, includes outreach, counseling and testing, information and referral services. Under Part BI of the CARE Act, also includes comprehensive primary medical care for individuals living with HIV/AIDS.

Eligible Metropolitan Area (EMA): Geographic areas highly-impacted by HIV/AIDS that are eligible to receive Part A CARE Act funds.

EIA (Enzyme-Linked Immunosorbent Assay): The most common test used to detect the presence of HIV antibodies in the blood, which indicate ongoing HIV infection. A positive ELISA test result must be confirmed by another test called a Western Blot.

Epidemiologic Profile: A description of the current status, distribution, and impact of an infectious disease or other health-related condition in a specified geographic area.

Family Centered Care: A model in which systems of care under Ryan White Part D are designed to address the needs of PLWH and affected family members as a unit, providing or arranging for a full range of services. Family structures may range from the traditional, biological family unit to non-traditional family units with partners, significant others, and unrelated caregivers.

Genotypic Assay: A test that analyzes a sample of the HIV virus from the patient's blood to identify actual mutations in the virus which are associated with resistance to specific drugs.

Grantee: The recipient of CARE Act funds responsible for administering the award.

HAART (Highly Active Antiretroviral Therapy): HIV treatment using multiple antiretroviral drugs to reduce viral load to undetectable levels and maintain/increase CD4 levels.

Health Insurance Continuity Program (HICP): A program primarily under Part B of the CARE Act that makes premium payments, co-payments, deductibles, and/or risk pool payments on behalf of a client to purchase/maintain health insurance coverage.

High-Risk Insurance Pool: A State health insurance program that provides coverage for individuals who are denied coverage due to a pre-existing condition or who have health conditions that would normally prevent them from purchasing coverage in the private market.

HIV/AIDS Dental Reimbursement Program: The program within the HRSA HIV/AIDS Bureau's Division of Community Based Programs that assists with uncompensated costs incurred in providing oral health treatment to PLWH.

HIV Disease: Any signs, symptoms, or other adverse health effects due to the human immunodeficiency virus.

HOPWA (Housing Opportunities for People With AIDS): A program administered by the U.S. Department of Housing and Urban Development (HUD) that provides funding to support housing for PLWH and their families.

HRSA (Health Resources and Services Administration): The agency of the U.S. Department of Health and Human Services that administers various primary care programs for the medically underserved, including the Ryan White CARE Act.

IDU (Injection Drug User): A person who uses a drug (eg, heroin, cocaine) that is administered with a needle and syringe.

Lead Agency: The agency within a Part B consortium that is responsible for contract administration; also called a fiscal agent (an incorporated consortium sometimes serves as the lead agency)

Multiply Diagnosed: A person having multiple morbidities (e.g., substance abuse and HIV infection) (see co-morbidity).

Needs Assessment: A process of collecting information about the needs of PLWH (both those receiving care and those not in care), identifying current resources (CARE Act and other) available to meet those needs, and determining what gaps in care exist.

NNRTI (Non-Nucleoside Reverse Transcriptase Inhibitor, called " non-nuke "): A class of antiretroviral agents (e.g., delavirdine, nevirapine, efavirenz) that stops HIV production by binding directly onto an enzyme (reverse transcriptase) in a CD4+ cell and preventing the conversion of HIV's RNA to DNA.

Nucleoside Analog (Nucleoside Analog Reverse Transcriptase Inhibitor, NRTI, called "nuke"): The first effective class of antiviral drugs (e.g., AZT or ZDV, ddI, ddC, d4T, ABC). NRTIs act by incorporating themselves into the HIV DNA, thereby stopping the building process. The resulting HIV DNA is incomplete and unable to create new virus.

Opportunistic Infection (OI) or Opportunistic Condition: An infection or cancer that occurs in persons with weak immune systems due to HIV, cancer, or immunosuppressive drugs such as

corticosteroids or chemotherapy. Kaposi's Sarcoma (KS), pneumocystis pneumonia (PCP), toxoplasmosis, and cytomegalovirus (CMV) are all examples of opportunistic infections.

Part A: The part of the CARE Act that provides emergency assistance to localities (EMAs) disproportionately affected by the HIV/AIDS epidemic.

Part B: The part of the CARE Act that provides funds to States and territories for primary health care (including HIV treatments through the AIDS Drug Assistance Program, ADAP) and support services that enhance access to care to PLWH and their families.

Part C: The part of the CARE Act that supports outpatient primary medical care and early intervention services to PLWH through grants to public and private non-profit organizations. Part C also funds capacity development and planning grants to prepare programs to provide EIS services.

Part D: The part of the CARE Act that supports coordinated services and access to research for children, youth, and women with HIV disease and their families.

PACTG (Pediatric AIDS Clinical Trials Group): Body that evaluates treatments for HIV-infected children and adolescents and develops new approaches for the interruption of mother-to-infant transmission.

PCR (Polymerase Chain Reaction): A laboratory process that selects a DNA segment from a mixture of DNA chains and rapidly replicates it to create a sample of a piece of DNA. For HIV, this is called RT-PCR, which is a laboratory technique that can detect and quantify the amount of HIV (viral load) in a person's blood or lymph nodes. PCR is also used for the diagnosis of HIV infection in exposed infants.

Phenotypic Assay: A procedure whereby sample DNA of a patient's HIV is tested against various antiretroviral drugs to see if the virus is susceptible or resistant to these drug(s).

Planning Council: A planning body appointed or established by the Chief Elected Official of an EMA whose basic function is to assess needs, establish a plan for the delivery of HIV care in the EMA, and establish priorities for the use of Part A CARE Act funds.

Planning Process: Steps taken and methods used to collect information, analyze and interpret it, set priorities, and prepare a plan for rational decision making.

PLWH (People Living with HIV Disease)

Priority Setting: The process used to establish priorities among service categories, to ensure consistency with locally identified needs, and to address how best to meet each priority.

Prophylaxis: Treatment to prevent the onset of a particular disease (primary prophylaxis) or recurrence of symptoms in an existing infection that has previously been brought under control (secondary prophylaxis).

Protease: An enzyme that triggers the breakdown of proteins. HIV's protease enzyme breaks apart long strands of viral protein into separate proteins constituting the viral core and the enzymes it contains. HIV protease acts as new virus particles are budding off a cell membrane.

Protease Inhibitor: A drug that binds to and blocks HIV protease from working, thus preventing the production of new functional viral particles.

Quality: The degree to which a health or social service meets or exceeds established professional standards and user expectations.

Retrovirus: A type of virus that, when not infecting a cell, stores its genetic information on a single-stranded RNA molecule instead of the more usual double-stranded DNA. HIV is an example of a retrovirus. After a retrovirus penetrates a cell, it constructs a DNA version of its genes using a special enzyme, reverse transcriptase. This DNA then becomes part of the cell's genetic material.

Reverse Transcriptase: A uniquely viral enzyme that constructs DNA from an RNA template, which is an essential step in the life cycle of a retrovirus such as HIV. The RNA-based genes of HIV and other retroviruses must be converted to DNA if they are to integrate into the cellular genome. (See Retrovirus)

RT-PCR (Reverse Transcriptase Polymerase Chain Reaction): A laboratory technique that can detect and quantify the amount of HIV (viral load) in a person's blood or lymph nodes.

Salvage Therapy: A treatment effort for people who are not responding to, or cannot tolerate the preferred, recommended treatments for a particular condition. In the context of HIV infection, drug treatments that are used or studied in individuals who have failed one or more HIV drug regimens. In this case, failed refers to the inability to achieve or sustain low viral load levels.

Seroconversion: The development of detectable antibodies to HIV in the blood as a result of infection. It normally takes several weeks to several months for antibodies to the virus to develop after HIV transmission. When antibodies to HIV appear in the blood, a person will test positive in the standard ELISA test for HIV.

Seroprevalence: The number of persons in a defined population who test HIV-positive based on HIV testing of blood specimens. (Seroprevalence is often presented either as a percent of the total specimens tested or as a rate per 100,000 persons tested.)

Service Gaps: All the service needs of all PLWH except for the need for primary health care for individuals who know their status but are not in care. Service gaps include additional need for primary health care for those already receiving primary medical care ("in care").

SPNS (Special Projects of National Significance): A health services demonstration, research, and evaluation program funded under Part F of the CARE Act to identify innovative models of HIV care. SPNS projects are awarded competitively.

STD (Sexually Transmitted Disease)

TA (Technical Assistance): The delivery of practical program and technical support to the CARE Act community. TA is to assist grantees, planning bodies, and affected communities in designing, implementing, and evaluating CARE Act-supported planning and primary care service delivery systems.

Target Population: A population to be reached through some action or intervention; may refer to groups with specific demographic or geographic characteristics.

Transmission Category: A grouping of disease exposure and infection routes; in relation to HIV disease, exposure groupings include, for example, men who have sex with men, injection drug use, heterosexual contact, and perinatal transmission.

Unmet Need: The unmet need for primary health services among individuals who know their HIV status but are not receiving primary health care.

Viral Load: In relation to HIV, the quantity of HIV RNA in the blood. Viral load is used as a predictor of disease progression. Viral load test results are expressed as the number of copies per milliliter of blood plasma.

Western Blot: A test for detecting the specific antibodies to HIV in a person's blood. It is commonly used to verify positive EIA tests. A Western Blot test is more reliable than the EIA, but it is more difficult and more costly to perform. All positive HIV antibody tests should be confirmed with a Western Blot test.

Wild Type Virus: HIV that has not been exposed to antiviral drugs and therefore has not accumulated mutations conferring drug resistance.

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